


HEALTH SCIENCES LIBRARY
UNIVERSITY OF MARYLAND
BALTIMORE



Digitized by the Internet Archive
in 2011 with funding from
LYRASIS Members and Sloan Foundation





BULLETIN
School of Medicine
University of Maryland

Volume 48
1963

- Anesthesia Induced by Emulsions of Volatile Anesthetics, page 21
- Anesthetics, Anesthesia Induced by Emulsions of Volatile, page 21
- Animal Experimentation, Congress and Editorial, page 4
- Anomalous Origin of the Left Coronary Artery Arising from the Pulmonary Artery in an Infant: Report of a Case, page 12
- A Quarter-Century of Mercurial Diuretic Therapy, page 59
- Aspirin, Some New Aspects of an Old Drug, page 6
- Auditory Evoked Brain Potentials in Man, page 33
- Auditory Research Unit, Mobile, page 24
- Blanchard, Cyrus L., M.D., pages 24, 33
- Book Reviews:
- Combined Textbook of Obstetrics and Gynecology edited by Sir Dugald Baird. Reviewed by Norman Levin, M.D. January p. viii
- Tumor Viruses of Murine Origin edited by G. E. W. Wolstenholme and M. O'Connor. Reviewed by Robert B. Schultz, M.D. January p. viii
- A Histology of the Body Tissues by Margaret Gillison. Reviewed by Miriam Cohen. January p. ix
- Clinical Pathology: Application & Interpretation by Benjamin B. Wells, M.D. Reviewed by William Weglicki, M.D. January p. x
- Typhoid Fever and Other Salmonella Infections by R. L. Huckstep. Reviewed by Theodore E. Woodward, M.D. January p. x
- Congenital Cardiac Diseases: A Review of 357 Cases Studied Pathologically by Robert S. Fontana, M.D. and Jesse E. Edwards, M.D. Reviewed by William Weglicki, M.D. April p. xxii
- Aids to Anatomy by R. J. Last. Reviewed by John A. Wagner, M.D. April p. xxii
- An Introduction to Diagnostic Enzymology by J. H. Wilkinson. Reviewed by Moritz Michaelis, Ph.D. July p. xiii
- Aids to Surgery by Michael Harnes, M.B. and G. Maurice Lunn, F.R.C.S. Reviewed by Mary C. Burchell, M.D. July p. xiii
- Pulmonary Structure and Function edited by A. V. S. de Reuck and M. O'Connor. Reviewed by John A. Wagner, M.D. July p. xiii
- Aids to Zoology by R. E. Lister. Reviewed by John A. Wagner, M.D. July p. xiv
- Foundation of Anatomy and Physiology by Janet S. Ross and Kathleen J. W. Wilson. Reviewed by John A. Wagner, M.D. July p. xiv
- Borsanyi, Steven J., M.D., pages 24, 33
- Brain Potentials in Man, Auditory Evoked, page 33
- Cascorbi, Helmut F., page 21
- Congress and Animal Experimentation, Editorial, page 4
- Cope, David A., M.D., page 27
- Diuretic Therapy, A Quarter-Century of Mercurial, page 59

INDEX TO VOLUME 48

- Feder, Aaron, M.D., page 59
- Gerlach, James J., M.D., page 27
- Global Medicine: A New Dimension,
Editorial, page 1
- Hachtel, Frank W., M.D., page 29
- Hayward, Oliver S., M.D., page 39
- Hicken, William J., M.D., page 12
- Krantz, John C., Jr., Ph.D., page 21
- Lee, Yu-Chen, M.D., page 12
- Mobile Auditory Research Unit, page 24
- Nathan Smith and his Son, Ryno, Two
Nineteenth Century Medical Profes-
sors, page 39
- Smith, D. C., Ph.D., page 4
- Some New Aspects of an Old Drug:
Aspirin, page 6
- Tamres, Avrum, page 24
- Truitt, Edward B., Jr., Ph.D., page 6
- Two Nineteenth Century Medical Pro-
fessors: Nathan Smith and his Son,
Ryno, page 39
- Wisseman, Charles L., Jr., M.D., page 1

PLEASE TEAR OUT

ALUMNI NEWS REPORT

TO THE BULLETIN:

I would like to report the following:

TEAR OUT

SUGGESTIONS FOR NEWS ITEMS

American Board Certification
Change of Address
Change of Office
Residency Appointment
Research Completed
News of Another Alumnus
Academic Appointment
Interesting Historic Photographs

Name _____

Address _____

Class _____

Send to

Bulletin—School of Medicine
University of Maryland
31 S. Greene St.
Baltimore 1, Md.

BULLETIN *School of Medicine* *University of Maryland*

VOLUME 48

JANUARY, 1963

NUMBER 1

Editorial

Global Medicine: A New Dimension

EXPERIMENTS IN NATURE are taking place in continuous array in the great laboratory of the earth's biosphere with man as the subject interacting with the multitudinous, geographically varied biological and physical elements in his environment. Imaginative recognition of this global potential, careful and systematic observation of the pertinent phenomena, and creative interpretation of the data promise to unlock new doors to knowledge of human biology and medicine. Unfettered by secular ties and national boundaries and free to develop as a branch of knowledge in its own right with the entire world under its scrutiny, the global perspective on human biology offers another dimension to medicine just as it has to some other branches of science—for example, the revolution in biological thought that stemmed from the works of Charles Darwin and Alfred Russell Wallace. Distance no longer constitutes a barrier.

A truly global perspective of medical science, however, is still in an evolutionary phase, yet to achieve the freedom to develop and mature, as many other branches of science have, into a way of thinking, justifying support on its own merits. Over the years some imaginative investigators have captured the spirit of the world-wide concept. But more often medicine overseas has gained its greatest support when it has served some special interest as a means for accomplishing another purpose. Altruistic and selfish, political and scientific motives all have merged at one time or another into the act of bringing medical science to our fellow human beings in other lands. Because control of disease has powerful appeal and influence, even to the most primitive of men, it is not surprising that medicine has long served as a handmaiden of other masters—of the missionary bent on substituting his faith for another; of the politician with his armies in unfamiliar surroundings, with his colonies and with his hot and cold wars; or of the businessman with his plantations, mines, and oil fields.

Moreover, recent technological developments in transportation have reinforced a self-preservation motive for an international interest in medicine. Jet air travel has transformed midcontinental cities into international ports of entry receiving persons who, only a few hours before, may have left the most remote part of the earth, well within the incubation period of most transmissible diseases. Because the usual quarantine procedures cannot be applied with absolute certainty to the millions of people who travel in and out of this country each year, control of communicable

disease abroad has become recognized as another means for minimizing the threat to our own population.

Students of world politics have begun to appreciate the subtle impact of medical science upon world affairs, beyond the superficial role as an expedient for the production of instant good will. A great and important unsolved paradox is looming ahead which cannot safely be ignored indefinitely, but in which scientific, philosophical, religious, and political elements are all struggling for an adequate conceptual adjustment and practical solution. On the one hand, disease and malnutrition sap the strength of people, impair productivity, and temper receptivity or resistance to one political doctrine or another. World economy and political stability respond to these factors. On the other hand, the simplest of public health measures often is found to contribute greatly to a disproportionate increase in population with relation to food supply, to natural resources, to jobs and means for earning a livelihood, creating again social and political discontent. And masses of discontented people, whether diseased or healthy, have always threatened political stability. It is evident that much remains to be learned about human population dynamics, natural controlling factors, and relation of the stresses of overpopulation to human disease, to the pursuit of happiness, and to prospects of peaceful coexistence.

Important as all these facets of medicine in international affairs may be, they nevertheless represent primarily practical *applications* of medical knowledge, with medical science giving to other causes rather than enhancing its own development as a branch of knowledge capable of contributing more generally to human welfare—a fundamentally different orientation. The medical scientist can take the initiative. He can ask what the great variety of experiments in nature taking place under many different circumstances can contribute to the elucidation of basic phenomena in human biology and medicine. The investigator in his laboratory can ask where, on the surface of the earth, do conditions exist which are best suited for the study of any given phenomenon, and he will find a reasonable opportunity to go there and to make his study. This approach to global medicine offers almost limitless opportunities for increasing our fund of knowledge without necessarily robbing it of its immediate humanitarian qualities. Already some fields are benefiting from this evolving concept—for example, possible relationship between vascular disease and nutrition through a comparative study of people with different dietary customs, the possible infectious nature of some neoplasms through the study of an apparent epidemic in Africa, the elucidation of basic physiological phenomena through the study of man's adaptation to different environments, mechanisms of genetic control through a study of isolated or segregated populations.

This nation is already heavily committed in many ways to various aspects of medicine in international affairs through a large number of programs sponsored by governmental and private agencies alike, dedicated to a miscellaneous array of purposes. Some serve humanitarian causes, others gain their support through political motives, and a few are dedicated principally to the study of man. One program, however, seems to stand apart from the others. The International Centers for Medical Research and Training, sponsored under a program conceived and administered by the National Institutes of Health in response to the charge assigned them for expediting the International Health Act of 1960, have been established

for the purpose of developing broad research programs in medical problems of global significance and of providing training opportunities for research in problems of this kind. Five such centers have been established in American university medical schools (Johns Hopkins University, Louisiana State University, Tulane University, University of California, and University of Maryland). The basic organization of the centers includes a research and training center at the parent university in the U. S. and one in an overseas establishment in some country which provides unique opportunities for research and experience with diseases of major global significance. In addition to the benefits which may accrue to the host country from their programs, it is expected that these centers will contribute significantly to the general fund of scientific information about human biology and disease and will provide this country with a reservoir of young medical scientists, experienced in medical problems of international importance and possessing a global orientation in thought, who can help meet the increasing responsibilities of this nation in world medical affairs. Although the current efforts and orientation, both at the granting agency level and at the universities, are concerned with the immense problem of establishing home and specific overseas centers, it is to be hoped that these centers will eventually participate substantially in the development of a truly global concept of human biology.

CHARLES L. WISSEMAN, JR., M.D.
*Professor of Microbiology and Head
of the Department
School of Medicine, University of Maryland*

Discussion

MARITIME STATES such as Maryland have always had the problem of handling exotic diseases as well as the common communicable diseases that might be introduced by ship passengers and crews that have visited or traveled from foreign lands. This led to quarantine laws and stations. Modern travel has made these precautionary measures less effective because travel from the farthest reaches of the earth can now be accomplished in less time than that involved in the very short incubation periods of some diseases.

There are lands where man's survival has been more related to his innate ability to withstand an adverse environment than because of his alteration of that environment by advanced public health measures. There is much to be gained by studying the factors involved in environments where biological fitness is the major factor involved in a society.

The student of medicine today must have access to, and learn the relative importance of, protected environments and what can be expected if these man-developed protections are lost. Whether we are dealing with communicable diseases, nutrition, or social environment involving great stress, the physician must be able to appreciate the factors at play and have the knowledge to guide both public and individual actions in the pathway where there is the best possibility for physical and mental health.

The faculty of the medical school, appreciating these responsibilities, decided in 1960 to seek the opportunity to study health problems on a world-wide basis with a station for research and advance study in a country in Asia.

Through a grant from the U. S. Public Health Service and support of President Elkins and the Regents of the University, we have been able to establish such a program. The Government of Pakistan has agreed to work with us in a research and graduate education program at the Institute of Hygiene at Lahore, Pakistan. This program called the "International Center for Medical Research and Training" will work for the mutual benefit of students from both Pakistan and the United States. The studies will be carried out at both the School of Medicine in Baltimore and the field station at the Institute of Hygiene at Lahore, Pakistan.

We believe that this activity, along with other developments, will allow the Medical School to present a better program of medical education for both the undergraduate and graduate in meeting local and national responsibilities.

WILLIAM S. STONE, M.D.
Dean

Congress And Animal Experimentation

ONCE AGAIN animal experimentation, the cornerstone of medical research, is under attack. This time the threat is more dangerous than ever before, since it comes in the guise of federal regulation. The last session of Congress saw the introduction of two bills (H.R. 1937 and H.R. 3556) which would give the federal government the power to license and to regulate medical research supported by federal funds in which, as one bill puts it, "any vertebrate species" (H.R. 3556) is used. Thus not only common laboratory animals such as dogs, rats, and rabbits would be included but fish, turtles, and frogs as well. In addition the bills would require elaborate reports on the number of animals used and their disposal, as well as conferring the rights of inspection on agents of the federal government.

This is not the first time attempts have been made to abolish, restrict, or regulate animal experimentation. Medical researchers have been fighting a valiant and successful action against those who would seek to forbid or to restrict the use of animals in the laboratory.

Perhaps it would not be amiss at this point to consider the implications of such legislation against the backdrop of history. In the past 100 years man has gained more control over his internal and external environment than has occurred since the dawn of history. This came about through a change in the attitude of men toward knowledge which began with the Renaissance. Slowly during the next 400 years the foundation for the scientific revolution was laid and the scientific method, as we know it today, evolved. The essence of this method is the freedom to challenge authority, the freedom to question what had been accepted as dogma in the past and above all the freedom to choose the method of inquiry and to pursue this to wherever it might lead.

Medicine too has learned the experimental approach and has made animal experimentation an integral part of its research procedure. Through its use, physiology has broadened its understanding of the body's functions and so enabled

clinicians to control numerous metabolic disorders. Surgery has moved forward following the development of new and daring techniques worked out on animals. Drugs are now available whose curative powers would have seemed miraculous even 25 years ago. The continued use of these experimental techniques in the hands of those who know how to apply them gives even greater promise for the future, and we can confidently expect the progress of the next 100 years to make that of the last 100 pale into insignificance.

This depends, however, on the freedom of medical research to follow its own path in its own way. Once this is challenged its effectiveness is seriously reduced. Therefore the passage of legislation which would place in the hands of an outside agency the power to say "no you cannot do that experiment" or "you must modify your procedure in this way" would be disastrous. Such power places in the hands of those who, however well intentioned they may be, are not in a position to make such judgments.

On the other hand, opposition to such measures does not mean that medical researchers are indifferent to the welfare of the animals placed in their care, for such is not the case. For many years now scientists in this field have concerned themselves with the problems of animal husbandry. Such organizations as the Animal Care Panel, American College of Laboratory Animal Medicine, and the National Society for Medical Research, backed by such groups as the Federated Societies of American Biology, The American Institute of Biological Sciences, and the Association of American Medical Colleges have studied the problems of animal care and have formulated carefully thought out rules and regulations on animal experimentation by men who are thoroughly familiar with the field. This is in keeping with accepted practices, since professional groups have always set up their own codes, established their own licensing rules, and policed themselves. Why should the medical researcher be made the exception and why should he be treated differently from his colleagues and forced to bow to the dictates of a federal bureaucracy?

D. C. SMITH, PH.D.

Associate Dean

School of Medicine, University of Maryland

Some New Aspects of an Old Drug: Aspirin

EDWARD B. TRUITT, JR. PH.D.

RECENTLY, because of a resurgent appreciation of its anti-rheumatic properties and a wide expansion in new potential uses, aspirin has been called a "reborn wonder drug." Although not all of the new uses have achieved therapeutic practicality, some seem to offer good possibilities. Most of these new uses have been developed from empirical observations in patients rather than as rational extrapolations from basic experiments. Thus their mechanism of action has not always been apparent and must be explained by *ad hoc* experimentation.

In addition to its well-known analgesic, anti-pyretic, and anti-inflammatory actions, aspirin has recently been recommended as an anti-allergic, anti-asthmatic, hypocholesterolemic, hypoglycemic, uricosuric, litholytic, anticoagulant, and basal metabolic stimulant drug. In addition to novel applications for aspirin, new data has also accumulated concerning its toxic side effects. These include the confirmation of gastrointestinal irritation and bleeding as directly attributable to aspirin ingestion. There has been increasing concern for rational methods to deal with acute salicylate intoxication because of its prevalence, especially in children. These new actions and toxic problems will be examined in this review with special attention to quantitative studies. Subsequent to Gross and Greenberg's critical bibliographic review¹ a number of general reviews have surveyed salicylate pharmacology.^{2, 3, 4}

Thus only recent developments in salicylate pharmacology need be considered here.

Anti-inflammatory Action

Perhaps the most active area of research in salicylate pharmacology has involved tests of the hypothesis that the anti-inflammatory action of these drugs could be mediated through stimulation of the anterior pituitary-adrenal cortex hormonal system. This attractive idea has received much experimental attention and has been the subject of several critical reviews.^{5, 6, 7, 8} The reports in favor of such a mechanism have been based largely upon indirect evidences of increased adrenal cortex activity. Decreases in adrenal ascorbic acid, adrenal cholesterol, and eosinopenia which are blocked by hypophysectomy have been cited. Also there is a striking similarity in the anti-rheumatic and anti-inflammatory actions of salicylates to ACTH or adrenocortical hormones.

Several critical questions have been raised which do not lend support to the proposal. One of these is the use of supra-therapeutic doses which are required for such demonstrations of adrenal cortical stimulation. Another is the indirect nature of measurements such as adrenal ascorbic acid depletion and the like. By the direct measurement of plasma steroids, increased amounts of circulating hormones are found only after the use of toxic doses of aspirin, while normal doses cause no change or a decrease.^{9, 10, 11} The correlation of chemical structure with both anti-rheumatic action and cer-

From the Department of Pharmacology, School of Medicine, University of Maryland, Baltimore.

tain indices of pituitary-adrenal stimulation is imperfect, but not altogether lacking, if large doses are used. In addition, there are a number of differences in activity between salicylates and adrenal cortical steroids, especially on carbohydrate metabolism. Although this hypothesis of action seems unlikely to explain the anti-rheumatic action of therapeutic doses, this possibility cannot be ruled completely out at present.

Meanwhile evidence continues to accumulate concerning other possible explanations of the anti-inflammatory effect. Aspirin has been claimed to have an anti-complementary action,¹² but this effect was promptly denied.¹³ It is effective in a number of anti-inflammatory tests such as experimental paw edema in the rat, produced by histamine or formaldehyde,¹⁴ and it inhibits extravascular leakage of dye in the cutaneous anaphylactic reaction in the guinea pig.¹⁵

Other more indirect explanations of the anti-rheumatic action have been proposed. It has been noted that hyperventilation in a respirator improved rheumatoid arthritis for as long as it induced hypocapnia.¹⁶ This suggested that a similar mechanism may be the case for aspirin which also induces hyperventilation with reduced carbon dioxide when given in large doses. However, there was no evidence of an analgesic or adrenal cortical effect produced by hyperventilation. It was suggested that vasoconstriction induced by the treatment and related to the carbon dioxide change was the mode of action. In male rats only, a correlation exists between active anti-rheumatic drugs of the salicylate type and increases in liver glutathione.¹⁷ This is a very difficult phenomenon to link to salicylate actions at present and requires further interpretation.

Metabolic Stimulant Action

Another attractive hypothesis lately proposed to correlate anti-rheumatic effects with pharmacologic action has been based upon the metabolic stimulation of tissues produced by salicylates. The basal metabolic rate of animals is raised similarly to thyroidal drugs. This increase appears to be caused by an uncoupling of oxidative phosphorylation.^{18, 19} This has been compared to uncoupling by dinitrophenol (DNP), however, the latter has no anti-rheumatic activity. This uncoupling action is correlated with anti-inflammatory activity for most anti-rheumatic compounds except gamma-resorcylic acid.²⁰ Many differences exist, however, between the nature of the salicylate and DNP uncoupling actions²¹ and in many ways salicylates resemble the action of thyroxine rather than DNP.²²

The thyroxine-like action of aspirin has been effective in restoring the decreased metabolic rate of myxedematous patients to normal.^{23, 24} Salicylates stimulate amino acid incorporation into protein similarly to thyroxine, but there are experimental differences in the mechanism of this action between the two.²⁵ Stimulation of hydrocortisone secretion may explain only a part of this action by aspirin which appears to result mainly from the direct tissue stimulation of large amounts. Paradoxically salicylates and other drugs which are strongly bound to proteins lower the plasma protein-bound iodine titer and release thyroxine,^{26, 27} but the application to hyperthyroidal subjects is of limited value.²⁸

Hypocholesterolemic Action

Concomitant with its anti-myxedematous effect salicylates lower plasma cholesterol as well.²³ The question of utility

again hinges upon dosage. Although it has been claimed that significant hypocholesterolemia can occur with 1.5-3 gm. doses^{29, 30} others insist that doses of 4-5 gm./day are required which enter the range of side effect toxicity.^{24, 31} Salicylates also lower free fatty acids and animal experiments suggest this may be by a direct action on their release from fat depots.³²

Hypoglycemic Action

The hypoglycemic action of salicylates in diabetes has been known many years since first reported by Ebstein in 1876 and Bartels in 1878 in Germany and by Williamson in 1901 in England. However, it was Reid and his associates³³ who suggested a re-evaluation of aspirin in diabetes. Favorable trials have also been reported in this country.^{34, 35, 36} This action is as yet unexplained. It is not likely related to its action on oxidative phosphorylation since the potent uncoupler, dinitrophenol, is a very weak hypoglycemic compound. Depletion of liver glycogen and reduction of hyperglycemia and glycosuria are caused by aspirin. These effects are all opposite in direction from the effects of adrenocortical steroids on carbohydrate metabolism. The glycogen depletion stems from two causes. Adrenal medullary stimulation accounts for a part, while decreased glycogen synthesis caused by delayed absorption and decreased gluconeogenesis account for the balance. Stimulation of glucose-6-phosphatase has been suggested as an enzymatic explanation of the ¹⁴C₆ glycogenolysis in the normal animal.³⁷ The insulin equivalence of a maximally effective dose of aspirin is reported to be 48 units in total replacement therapy.³⁸ Aspirin does not alter the absorption or normal excretion of glucose. It enhances the hypoglycemic action of tol-

butamide but not insulin.³⁶ Again practical limitations of side effects limit the utility of aspirin in all but quite mild cases of diabetes.

Litholytic Action

A dual action exists for salicylates on uric acid metabolism in that the threshold for excretion is lowered even though increased amounts are produced. Although the salicylates may thus aggravate uric acid containing renal stones, those formed mainly of calcium may be reabsorbed during aspirin therapy. This was attributed to a solubilization caused by increased glucuronide excretion.³⁹ Other investigators rejected this concept on the basis of increased calculosis in patients with spinal cord injury.⁴⁰ Increased urinary pH or altered surface tension were excluded as the probable mechanism.⁴¹ This study did not show an increase in total calcium amounts or concentrations although the glucuronides were increased as originally reported. Thus, the mechanism is not explained, and its existence has been questioned.

Anticoagulant Action

The anticoagulant action of aspirin has been known for some time. Large doses produce hypoprothrombinemia. This action seems to be a simple competition with Vitamin K for prosthetic group function in the enzymatic synthesis of prothrombin and other accelerators of prothrombin conversion. Although many reports have appeared suggesting this application, the almost complete lack of side effects by established anticoagulants and their greater potencies have discouraged such use.

Gastrointestinal Irritation

Bleeding in the gastrointestinal tract now seems established as a side effect of

chronic aspirin usage. It is not related to hypoprothrombinemia, but rather to direct irritation, especially by undissolved particles of the drug.⁴² Confirmation of blood loss and its relationship to aspirin administration is adequately substantiated by fecal blood tests⁴³ and studies with radioactive chromium.^{44, 45} Although there is general admission that the gastrointestinal side effects occur, there is considerable debate as to their seriousness. Muir and Cossar, who made one of the earliest observations of this action, re-emphasize in a more recent report that serious hemorrhage and ulceration may result from aspirin in a large per cent of candidates for gastrectomy.⁴⁶ In more chronic use, such as in arthritics, gastric side effects are higher than normal, but a greater tendency toward ulcer and anemia has not been proved.⁴⁷ Also, anticoagulant therapy is not contra-indicated in patients receiving salicylate drugs.⁴⁸

Salicylate Intoxication

Acute salicylate toxicity has received considerable research attention because of its continued frequency as a poison, especially in children. The metabolic and respiratory forms of acidosis produced may be corrected by the use of the organic buffering compound 2-amino-2-hydroxymethyl, 1-3-propanediol (Tris or THAM). This agent is ideally suited for the reversal of salicylate acidosis and it also promotes renal excretion of large amounts of drug since tubular reabsorption of salicylic acid is reduced by the shift to an alkaline urine. The compound seems to be effective in experimental salicylate intoxication⁴⁹ and has been extensively studied in other conditions.⁵⁰ Peritoneal dialysis has also been applied successfully to salicylate toxicity.⁵¹

In concluding this supplementary review of the many therapeutic actions and toxic effects of aspirin, one might speculate upon the future possibilities for this useful drug. It has been mainly the emphasis on lowered side effects which has shifted the long term choice of drugs in the treatment of arthritis from adrenocortical steroids to aspirin. There will probably be other similar areas where extended drug administration is handicapped by side effects in which aspirin might prevail over existing therapies. One such area might be the treatment of hypercholesterolemia. Triparanol (Mer-29) has already been withdrawn from use as a hypocholesterolemic drug because of side effect hazards. Nicotinic acid is also complicated by some side effects such as flushing, nausea, vomiting, and urticaria, but these would have to be compared side by side with aspirin in a large study. Certainly the great need for a safe, effective way to lower elevated cholesterol levels makes this salicylate action most interesting.

It is doubtful that aspirin could improve upon tolbutamide (Orinase) as a hypoglycemic drug, bishydroxycoumarin (Dicumarol) as an anticoagulant or liothyronine (Cytomel) for hypothyroidism. However, there has never been an established drug therapy for the prevention or treatment of renal calculi. Although its action seems limited to a single type of stone, this therapeutic possibility seems to be worthy of further investigation.

As a whole, it must be concluded that aspirin is an excellent example of a drug safe enough for widespread application through which other unnoticed beneficial actions may appear to the observant physician.

References

1. GROSS, M. and GREENBERG, L. A.: *The Salicylates: A Critical Bibliographic Review*. Hillhouse Press, New Haven, Conn. 1948.
2. SMITH, P. K.: Certain Aspects of the Pharmacology of Salicylates, *Pharmacol. Rev.*, 1:353, 1949.
3. SMITH, M. J. H.: Some Recent Advances in the Pharmacology of Salicylates. *J. Pharm. Pharmacol.*, 5:81, 1953.
4. SMITH, P. K.: The Pharmacology of Salicylates and Related Compounds. *Ann. N. Y. Acad. Sci.*, 86:38, 1960.
5. HAILMAN, H. F.: ACTH and Cortisone vs. Salicylates. *J. Clin. Endocr.*, 12:454, 1952.
6. EADES, C. H. and KING, J. S.: *Int. Rev. Med. & G. P. Clin.*, 169:612, 1956.
7. BATTERMAN, R. C.: A Critical Review of the Effects of Salicylates on Pituitary-Adrenal Function. *Postgrad. Med.*, 25:152, 1959.
8. DONE, A. K.: The Nature of the Anti-rheumatic Action of Salicylates. *Clin. Pharmacol. Ther.*, 1:141, 1960.
9. DONE, A. K., ELY, R. S., and KELLEY, V. C.: Salicylates and the Pituitary-Adrenal System. *Metabolism*, 7:52, 1958.
10. HERNDON, R. F., FREEMAN, S., WHEELER, J. X., and LESTINA, F. A.: The Acute Effect of Acetylsalicylic Acid in Man on the Plasma Concentration of Corticoids, the Corticotropin (ACTH) Response and Urinary Steroid Excretion. *A. M. A. Arch. Intern. Med.*, 101: 632, 1958.
11. ULLOA, A., GAUTNEY, M. C., HOLLEY, H. L., and HILL, S. R.: Therapeutic Doses of Salicylates. Effect on Adrenal Cortical Secretory Activity in Normal Subjects. *A. M. A. Arch. Intern. Med.*, 105:914, 1960.
12. VAN OSS, C. J., FRIEDMANN, J. C., and FONTAINE, M.: Anticomplementary Action of Aspirin. *Nature*, 189:147, 1961.
13. ANDERSON, K. W.: Alleged Anticomplementary Effect of Aspirin. *Nature*, 191:1012-13, 1961.
14. NORTHOVER, B. J. and SUBRAMANIAN, G.: Some Inhibitors of Histamine-induced and Formaldehyde-induced Inflammation in Mice. *Brit. J. Pharmacol.*, 16:163, 1961.
15. MARKS, V., SMITH, M. J. H., and CUNLIFFE, A. C.: The Mechanism of the Anti-inflammatory Activity of Salicylate. *J. Pharm. Pharmacol.*, 13:218, 1961.
16. KAHN, F. H., SIMMONS, D. H., and WEINBERGER, H. J.: The Effect of Hyperventilation on Rheumatoid Arthritis. *Arthritis Rheum.*, 4:342, 1961.
17. SPROULL, D. H.: Salicylate and Liver Glutathione. *Brit. J. Pharmacol.*, 16:180, 1961.
18. BRODY, T. M.: Action of Sodium Salicylate and Related Compounds on Tissue Metabolism *In Vitro*. *J. Pharmacol. Exp. Ther.*, 117:39, 1956.
19. PENNIAL, R., KALNITSKY, C., and ROUTH, J. I.: The Effects of Salicylic Acid and Related Compounds on *In Vitro* Rat Brain Respiration. *Arch. Biochem.*, 64:390, 1956.
20. ADAMS, S. S. and COBB, R.: A Possible Basis for the Anti-inflammatory Activity of Salicylates and Other Non-Hormonal Anti-Rheumatic Drugs. *Nature*, 181:773, 1958.
21. WALTNER, K., JR., OSERNOVSKY, M., and KELEMEN, E.: On Differences Between Some Effects of Salicylate and 2:4-Dinitrophenol. *Biochem. Pharmacol.*, 2:50, 1959.
22. PACKER, L., AUSTEN, F. K., and KNOB-LOCK, E. C.: Effect of Salicylates on Respiration and Phosphorylation in Heart Mitochondria. *Proc. Soc. Exp. Biol. Med.*, 100:239, 1959.
23. ALEXANDER, W. D. and JOHNSON, K. W. M.: A Comparison of the Effects of Acetylsalicylic Acid and dl-triiodothyronine in Patients with Myxoedema. *Clin. Sci.*, 15: 593, 1956.
24. HETZEL, B. S., CHARNOCK, J. S., and LANDER, H.: Metabolic Effects of Salicylate in Man. *Metabolism*, 8:205, 1959.
25. WEISS, W. P., CAMPBELL, P. L., DEIBLER, G. E., and SOKOLOFF, L.: Effects of Salicylate on Amino Acid Incorporation into Protein. *J. Pharmacol. Exp. Ther.*, 136:366-77, 1962.
26. CHRISTENSEN, L. K.: The Metabolic Effect of Salicylate and Other Hydroxybenzoates. *Acta Pharmacol.*, 16:129, 1959.
27. WOLF, J., STANDAERT, M. E., and RALL, J. E.: Thyroxine Displacement from Serum Proteins and Depression of Serum Protein-bound Iodine by Certain Drugs. *J. Clin. Invest.* 40:1373, 1961.
28. HETZEL, B. S., GOOD, B. F., WELBY, M. L., and CHARNOCK, J. S.: Salicylate-induced Fall in Plasma Protein-bound Iodine in Hyperthyroidism. *Lancet*, 1:957, 1960.

29. EIDLITZ, M.: Blood Cholesterol and Aspirin. *Lancet*, 2:1123, 1960.
30. DAGNALL, P.: Blood Cholesterol and Aspirin (Letter to Editor). *Lancet*, 1:55, 1961.
31. ALEXANDER, W. D., MACDOUGALL, A. I., OLIVER, M. F., and BOYD, G. S.: Blood Cholesterol and Aspirin (Letters to Editor). *Lancet*, 2:1399, 1960.
32. CARLSON, L. A. and OSTMAN, J.: Effect of Salicylates on Plasma Free Fatty Acid in Normal and Diabetic Subjects. *Metabolism*, 10:781-87, 1961.
33. REID, J., MACDOUGALL, A. I., and ANDREWS, M. M.: Aspirin and Diabetes Mellitus. *Brit. Med. J.*, 2:1071, 1957.
34. GILGORE, S. G.: Influence of Salicylate on Hyperglycemia. *Diabetes*, 9:392, 1960.
35. GILGORE, S. G. and RUPP, J. J.: The Long-Term Response of Diabetes Mellitus to Salicylate Therapy. *J.A.M.A.*, 180:145-46, 1962.
36. HECHT, A. and GOLDNER, N. G.: Reappraisal of the Hypoglycemic Action of Acetylsalicylate. *Metabolism*, 8:418, 1959.
37. ANDREWS, M. M.: Some Effects of Salicylate, Chlorpropamide and Insulin on Carbohydrate Metabolism in Normal and Diabetic Rats. *Metabolism*, 10:678, 1961.
38. REID, J. and LIGHTBODY, T. D.: The Insulin Equivalence of Salicylate. *Brit. Med. J.*, 1:897, 1959.
39. PRIEN, E. E. and WALKER, B. S.: Studies in Urolithiasis IV. Urinary Glucuronosides and Calcium Phosphate. *J. Urol.*, 74:440, 1955.
40. COMARR, A. E. and CARNE, H. O.: Acetylsalicylic Acid and Salicylamide: Effect on Renal Calculosis in Patients with Spinal Cord Injury. *J. Urol.*, 79:911, 1958.
41. HAMM, F. C., WEINBERG, S. R., KARAN-SKY, D., KESNER, L., and LEWIS, P.: Urinary Calculi. Excretion Studies After Oral Administration of Acetylsalicylic Acid and Glucuronolactone. *J.A.M.A.*, 167:720, 1958.
42. DOUTHWAITE, A. H. and LINTOTT, G. A. M.: Gastroscopic Observation of the Effect of Aspirin and Certain Other Substances on the Stomach. *Lancet*, 2:1222, 1958.
43. STUBBE, L.: Occult Blood Loss with Feces Resulting from Oral Aspirin Administration. *Brit. Med. J.*, 2:1062, 1958.
44. MATSUMOTO, K. K. and GROSSMAN, M. I.: Quantitative Measurement of Gastrointestinal Blood Loss During Ingestion of Aspirin. *Proc. Soc. Exp. Biol. Med.*, 102:517, 1959.
45. PIERSON, R. N., HOLT, P., and KEATING, R. P.: Aspirin Bleeding Measured by the Radioactive Chromium Technique. *Clin. Res.*, 8:30, 1960.
46. MUIR, A. and COSSAR, I. A.: Aspirin and Gastric Hemorrhage. *Lancet*, 1:539, 1959.
47. BARAGER, F. D. and DUTHIE, J. J.: Importance of Aspirin as a Cause of Anemia and Peptic Ulcer in Rheumatoid Arthritis. *Brit. Med. J.*, 1:1106, 1960.
48. WATSON, R. M. and PIERSON, R. N.: Effect of Anti-coagulant Therapy upon Aspirin-induced G.I. Bleeding. *Circulation*, 24:613, 1961.
49. STRAUSS, J. and NAHAS, G. G.: Amine Buffer (THAM) Used in Salicylate Poisoning. *Proc. Soc. Exp. Biol. Med.*, 105:348, 1960.
50. NAHAS, G. G. and PAPPER, E., Eds.: *In Vitro* and *In Vivo*. Effects of Amine Buffers. *Ann. N. Y. Acad. Sci.*, 92:33, 1961.
51. ELLIOTT, G. B. and CRICHTON, J. U.: Emergency Treatment for Salicylate Intoxication. *Lancet*, 2:840, 1960.

Anomalous Origin of the Left Coronary Artery Arising from the Pulmonary Artery in an Infant: Report of a Case

YU-CHEN LEE, M.D.* and WILLIAM J. HICKEN, M.D.**

THE ANOMALOUS ORIGIN of the left coronary artery arising from the pulmonary artery was first described by Abrikossoff in 1911.¹ Since then there have been more than 70 cases reported in infants^{2, 3, 4} and 16 cases in adults.^{5, 6}

This anomaly has been considered to be rare. Bland, *et al.*⁷ reported that it was found only once in 6,800 necropsies at Massachusetts General Hospital. However, Swann and Werthammer⁸ stated that in 623 autopsies performed within three years, three examples of such malformations were found. There was one instance of the right coronary artery originating from the pulmonary artery. Kuzman, *et al.*² reported an additional three cases; Keith³ reported 10; and Sabiston, *et al.*⁴ reported 12 instances. According to Keith, the incidence of this anomaly is 0.5% of the total group of congenital heart disease or once in 300,000 children in the Toronto Heart Registry.

A classical description of this disease was made by Bland, *et al.* in 1933. Eidlow and MacKenzie⁹ made the first clinical diagnosis in a living child in 1946. Until recently, the correct antemortem diagnosis of this condition has been considered to be purely academic. However,

considerable interest has been aroused in recent years because of the potential of surgical corrective procedures.

The findings of an additional case diagnosed prior to death is the subject of this report.

Case Report: A 5-month-old baby girl was admitted to the University Hospital on November 3, 1959, because of feeding difficulty, irritability, and pallor. The pregnancy and delivery were uncomplicated, and she weighed 3.2 kg. at birth. At about two months, the mother noted the baby had anorexia and was unusually irritable. She was tachypneic, tired easily when she cried, and had been pale since birth. There was no history of cyanosis. On the day of admission she vomited repeatedly after feeding.

Physical examination revealed a well-developed and moderately well-nourished female infant weighing 5.7 kg. She was irritable and extremely pale. There was no cyanosis. The heart rate was 180 per minute and regular. Respirations were 60 per minute and grunting in character. The heart was markedly enlarged, extending to the mid-axillary line on percussion. The heart sounds were of fair quality and no murmurs were heard. The lungs were clear. The liver was palpated 2-3 cm. below the right costal margin. Physical findings were otherwise normal.

Laboratory data: Hemoglobin 9.7 gm./100 cc., White blood cells 10,900/cc., with essentially normal differential counts. Serum glutamic transaminase was 67 GOT units. Chest x-ray (Fig. 1) and fluoroscopic examination demonstrated marked cardiac enlargement, primarily due to enlargement of the left ventricle. The vascular markings of the lungs were normal. Electrocardiograms (Fig. 2) re-

From the Division of Cardiology, Department of Medicine, and the Department of Pathology, School of Medicine, University of Maryland, Baltimore.

* Instructor in Medicine.

** Associate Resident in Pathology.

vealed sinus tachycardia and wide Q waves in leads I, AVL, V5 and V6. The ST segments were elevated in leads I, AVL and V6; T waves were diphasic in leads I, II, and III, and inverted in AVF, V5 and V6. These findings were compatible with anterolateral myocardial infarction and diaphragmatic myocardial damage. A spatial vectorcardiogram was recorded by the cube technique (Fig. 3). In the horizontal and sagittal plane projection, the QRS sE loops were initially directed anteriorly, then sharply posteriorly. In the frontal plane, the direction of inscription of the QRS sE loop was counterclockwise.

Hospital course: She was digitalized and improved considerably during the first few days in the hospital. Her pulse rate dropped to 120-140 per minute. Her color improved and she was no longer tachypneic. Repeated ECGs revealed no significant changes except in rate. She was afebrile except for an elevation of temperature 101.4° F. (rectally) on the second hospital day. The clinical diagnosis of anomalous left coronary artery arising from the pulmonary artery was made. Surgical intervention was considered. However, on the 16th hospital day the respirations were labored, and during the next few days she developed retraction of the chest wall and wheezing. Achromycin was started on the 19th hospital day. Early the next morning her temperature rose to 102° F. and she appeared acutely ill. In spite of oxygen therapy her condition deteriorated and she expired at 11.00 A.M. November 22, the 20th hospital day. An autopsy was performed.

Pathologic Findings

Gross: The important gross anatomic findings were limited to the heart which weighed 108 grams (the average normal weight is 30 grams). The right atrial and right ventricular chambers were normal in size. The myocardium of the latter measured 5 mm. in thickness and was considered to be moderately hypertrophied. The left atrium and left ventricle were markedly dilated. The left ventricle measured 10 mm. in thickness at the level of the mitral valve and gradually narrowed to a thickness of 2 mm. at the apex. No aneurysmal dilatation



Fig. 1. Posteroanterior view of the chest. There is marked enlargement of the heart, especially of the left ventricle.

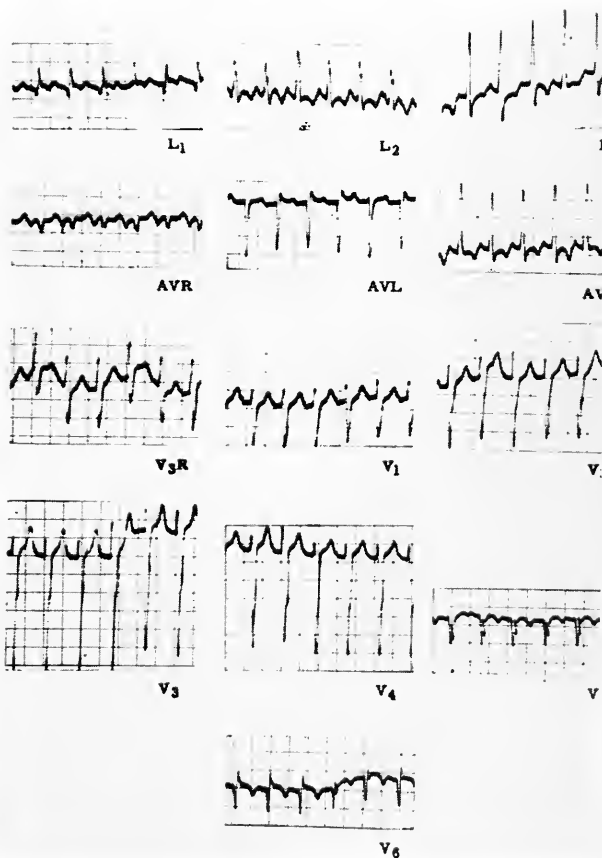


Fig. 2. ECG taken on the day of admission reveals significant Q waves in leads I, AVL, V5 and V6. There are also accompanying ST and T wave changes compatible with anterolateral myocardial infarction and diaphragmatic damage.



Fig. 3. Vectorcardiogram shows marked displacement of the QRS sT loop posteriorly. For the detailed description see the text.

of the apex of the left ventricle was present. Small foci of fibrosis were scattered throughout the myocardium of the left ventricle. The endocardium of the left cardiac chambers was gray, opaque, and moderately thickened, while that of the right heart appeared normal. The cardiac valves were normal.

The left coronary artery arose from the posterior pulmonary sinus and divided into circumflex and anterior descending branches which pursued a normal pattern of distribution over the epicardial surface. The wall of this aberrant artery appeared thin and transparent. The right coronary artery originated from its normal position in the anterior aortic sinus and had a normal peripheral distribution. No gross anastomosis between the coronary arteries were demonstrable. There were no additional anomalies of the heart or great vessels.

Microscopic: Sections of the left coronary artery revealed the diameter of its lumen and the thickness of its wall to be slightly less than that of the right coronary artery. Although the overall size of this aberrant vessel was mildly reduced, the structural components of its wall were arterial and were normally proportioned. The media of the left coronary artery was not abnormally thin. The proximal segments of both coronary arteries demonstrated a mild, eccentric

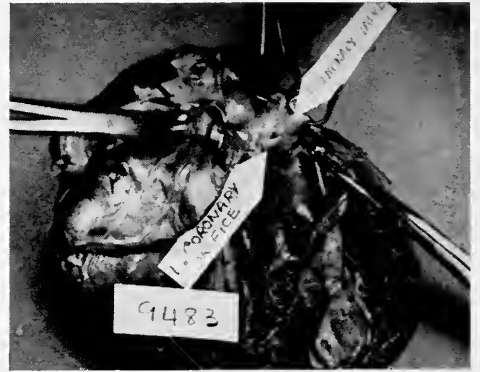


Fig. 5. Marked dilatation and moderate endocardial fibroelastosis of the left atrium and ventricle.

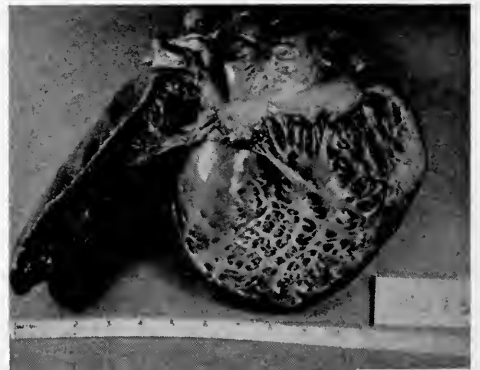


Fig. 4. Ostium of left coronary artery in posterior pulmonary sinus.

intimal thickening consisting of fibroblasts and delicate collagen fibers within a pale eosinophilic matrix.

Except for mild hypertrophy of the myocardial fibers, microscopic sections of the right atrium and ventricle were

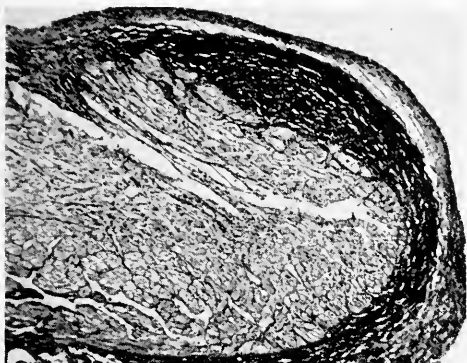


Fig. 6. Left ventricle with endocardial fibroelastosis and vacuolization of myocardial fibers. Verhoeff elastic stain, x 100.

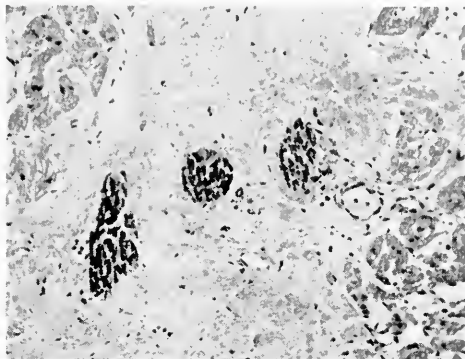


Fig. 7. Focal myocardial fibrosis and calcification of the left ventricle. Hematoxylin and eosin, x 205.

normal. The endocardium of the left atrium and ventricle was moderately thickened and composed of a dense layer of collagen and elastic fibers. The myocardial fibers of the left cardiac chambers were markedly hypertrophied. In addition, most of the subendocardial and subepicardial muscle fibers of the left ventricle were extremely vacuolated. A fat stain was negative, but a periodic acid-Schiff stain with and without diastase digestion revealed these vacuolated fibers to contain a moderate amount of glycogen. Small areas of fibrosis were scattered throughout the left ventricular myocardium, but no acute infarction was present. Foci of dystrophic calcification were present within several of these myocardial scars.

The lungs revealed moderate edema and a mild interstitial pneumonia involving the right upper and left lower lobes. There was moderate acute passive congestion of the liver, spleen, and kidneys.

Discussion

There are several types of anomalies of the coronary arteries. When both of the coronary arteries originate from the pulmonary artery, the condition is not compatible with life.^{8, 10, 11} An anomalous right coronary artery arising from the

pulmonary artery was reported by Brooks¹² as early as 1886. However, the incidence has been comparatively low.^{13, 14} A single coronary artery originating from the aorta has been described.^{15, 16} Patients with this condition are asymptomatic and experience a normal life span provided no other cardiac anomaly exists. An anomalous left coronary artery arising from the pulmonary artery has been more frequently reported in both infants and adults, and more commonly in infants.

Anatomy and Pathology of the Anomalous Left Coronary Artery: The coronary arteries normally arise in embryonic life as two primitive endothelial buds on the lateral sides of a common arterial trunk, before the trunk is divided by the spiral septum into the aorta and the pulmonary artery. An anomalous left coronary artery presumably could arise from the pulmonary artery if the left endothelial bud were to develop from the lateral portion of the common arterial trunk which is to become the pulmonary artery.⁵ It is also possible for the spiral septum to divide the common arterial trunk abnormally in such a way as to include the left coronary artery in the portion that is to become the pulmonary artery.⁵ An anomalous left coronary

artery arises from the posterior of the left pulmonary sinus and divides into circumflex and anterior descending branches with the normal pattern of distribution. It is usually smaller in caliber than the right coronary artery and is often thin-walled. Unless specially studied, the origin of the left coronary artery can be readily overlooked. The origin of the right coronary artery is normal, although it may be somewhat dilated and tortuous during its course. The left ventricle has been described as markedly dilated, and the wall of the left ventricle is usually normal in thickness. However, it may be either hypertrophied or abnormally thin. Small foci of fibrosis have been reported to occur throughout the myocardium of the left ventricle. In some instances there are patches of dystrophic calcification within the myocardial scars. The endocardium of the left ventricle generally shows some degree of endocardial fibroelastosis. These changes are conspicuously absent in the right ventricle. Anoxia is considered to be the cause of endocardial fibroelastosis by some authors.¹⁷ However, the concept has been questioned because many severely cyanotic children with other types of congenital disease do not show such changes.

Hemodynamic Considerations: Recent cardiac catheterization studies of the newborn infant have indicated that neonatal pulmonary hypertension disappears shortly after birth.^{18, 19} Within a short time after delivery, the normal neonate has a mean pulmonary arterial pressure of about 35 mm. Hg.; by the age of one week the mean pulmonary arterial pressure falls to 15 or 16 mm. Hg. If the pulmonary arterial pressure is higher than the resistance of the anomalous left coronary artery, the direction of the blood flow will be from the pul-

monary artery to coronary artery. In such an instance, the anomalous left coronary artery will receive venous blood under a relatively low pressure with resultant insufficient circulation to the left ventricle. There is good evidence to indicate that the direction of the blood flow is from the anomalous left coronary artery into the pulmonary artery. This possibility had been suggested by Brooks¹² in 1886. He noted that the branches of the anomalously arising right coronary artery anastomosed over the cardiac wall with branches of the normally arising left coronary artery. Referring to the much greater pressure in the aorta than the pulmonary artery, he stated that there could be no doubt that the right coronary artery acted very much as a vein and that the blood flowed through it toward the pulmonary artery and from thence into the lungs. Edward and Burchell^{20, 21} suggested the possibility of retrograde flow occurring in the anomalous coronary artery arising from the pulmonary artery. There would thus be a run-off of blood from the normally arising coronary artery into the anomalous one. Apley and associates²² observed at surgery that when the coronary artery which arose from the pulmonary artery was divided, bright red blood flowed from the distal end. In one case reported by Sabiston and associates,⁴ it was demonstrated that the blood in the left coronary artery was arterial having oxygen saturation of 100 per cent. The pressure in this vessel rose from 25 mm. Hg. to 75 mm. Hg. when the left coronary artery was occluded at its origin. Davis, *et al.*²³ operated upon a 19-year-old girl who was thought to have patent ductus arteriosus. At surgery, an anomalous left coronary artery was seen which communicated directly with the infundibular region of the right ventricle. The

continuous murmur and the thrill disappeared after the ligation of the anomalous coronary artery. Lampe and Verheugt⁶ also reported a case in which selective aortography revealed an anomalous left coronary artery emptying into pulmonary artery. The prior diagnosis was patent ductus arteriosus since a "typical" continuous murmur had been detected.

Other instances of free communication between the left and right coronary arteries have also been demonstrated at autopsy.^{4, 24}

Clinical features: The infant usually appears normal at birth. Growth and development are not unusual and the baby remains asymptomatic during the early days of life. Tachypnea, wheezing respirations, tachycardia, irritability, and difficulty in feeding with frequent regurgitation of food usually appear between the second and sixth months. There may be bouts of severe colicky pains, pallor, profuse sweating, and peripheral cyanosis. The heart is often greatly enlarged. Cardiac murmurs are generally not prominent, although a continuous murmur has been described in a few persons who survived to adult life. The ECG is usually characteristic among those who die in early life. Significant Q waves are present in leads I, AVL, and the left precordial leads in most of the cases. Taussig²⁵ stated that in spite of the huge size of the left ventricle, the ECG shows no evidence of left ventricular hypertrophy as the enlargement of the left ventricle is due to dilatation but not hypertrophy. However, a deep S wave with low R/S ratio is usually present in V1 among the published cases. No vectorcardiogram has been reported previously. In the present case, the QRS sE loop in the horizontal and sagittal planes suggest the loss of antero-lateral

myocardial force compatible with antero-lateral myocardial infarction.

The transaminase level was not significantly elevated in the present case, probably because no fresh myocardial lesions were found. Chest x-ray reveals marked enlargement of the heart involving predominantly the left ventricle. The results of routine cardiac catheterization contribute little to the diagnosis. Visualization of the anomalous coronary artery arising from the pulmonary artery by venous angiocardigraphy is difficult because of the lower pressure in the pulmonary artery. No well-documented successful attempt has been reported. Retrograde aortography has been suggested²⁶ as of possible diagnostic value because only the right coronary artery would be seen to arise from the base of the aorta. However, one must realize that even when both coronary arteries arise normally, it is not always possible to demonstrate them by aortography. The diagnosis will be confirmed if the anomalous left coronary artery empties into the pulmonary artery. Antemortem clinical diagnosis is not difficult when the history, clinical symptoms, physical, electrocardiographic, and radiologic findings are typical. Among the various forms of congenital heart disease, endocardial fibroelastosis is particularly difficult to differentiate from the anomalous coronary artery. Both conditions appear in early life and are associated with left ventricular enlargement without significant cardiac murmurs. The ECG and vectorcardiogram are helpful in the differential diagnosis. In patients with an anomalous left coronary artery, the changes are characteristic of anterolateral myocardial infarction; while in endocardial fibroelastosis, left ventricular hypertrophy is the only important finding. Myocarditis, when accompanied by

the electrocardiographic changes of severe acute myocardial injury, will present difficulty in diagnosis. Three such cases were reported by Dominguez, *et al.*²⁷ The ECGs of two of their patients showed Q waves in leads 2 and 3, and one had Q waves in V5 and V6. It may be pointed out that in none of these cases was there evidence of left ventricular hypertrophy. Furthermore, the electrocardiographic pattern of an anomalous left coronary artery is that of anterolateral myocardial infarction, while the changes caused by myocarditis may be those of diffuse anterior or diaphragmatic myocardial infarction.

According to prognosis, patients having an anomalous coronary artery arising from the pulmonary artery are classified into two groups. In one group, the patients die within the first four months of life, and only a few survive the first year of life. In the other group, the average age of death is between 30 and 40 years. Abbott²⁸ reported a patient who lived 64 years. Death usually occurs suddenly and unexpectedly. The difference in prognosis between these two groups is not clearly understood, although it may be due to the difference in the degree of collateral circulation.

Several surgical procedures have been advocated for patients with an anomalous left coronary artery arising from the pulmonary artery: (1) Introduction of talc²⁹ or concentrated phenol⁴ into the pericardial cavity to increase collateral circulation at the left ventricle; (2) creation of aorta-pulmonary communication³⁰ or supravulvular pulmonic stenosis³¹ in order to increase the oxygen content of pulmonary arterial blood or its perfusion pressure; (3) ligation of the aberrant coronary at its origin in order to prevent the retrograde flow;^{4, 20, 24} and (4) excision of the infarcted area of

the left ventricle and transplantation or anastomosis of the anomalous left coronary artery to a systemic artery.³² Successful ligation of the anomalous left coronary artery at its origin was carried out in a few cases.^{4, 24} However, sudden death at the time the vessel was clamped was reported by Kuzman and associates.² These authors argued against this procedure and do not share the view that the anomalous left coronary artery acts as a venous portion of an arteriovenous fistula. Transplantation or anastomosis of the anomalous left coronary artery to a systemic artery is a logical procedure. However, it is extremely difficult because of the small caliber of the vessel. No successful case has yet been reported in the literature. Whether such patients would subsequently be able to lead a normal life or not is a question which cannot be answered at this time. Unfortunately, in those cases previously reported, extensive myocardial damage was present at the time the clinical diagnosis was established. Therefore, the clinician should be aware of this type of congenital heart disease, recognize its initial signs and symptoms and establish the diagnosis as quickly as possible. Otherwise, surgical intervention may not provide significant beneficial results.

Summary

A case of an anomalous left coronary artery arising from the pulmonary artery is described. Clinical manifestations, hemodynamic findings, pathologic changes and methods of surgical treatment are reviewed. The importance of early diagnosis is emphasized.

Acknowledgement

We wish to thank Dr. Leonard Scherlis, Head, Division of Cardiology, University of Maryland School of Medicine for his invaluable advice.

References

1. ABRIKOSSOFF, A.: Aneurysma des linken Herzventrikels mit abnormer Abgangstelle der linken Koronararterie von der Pulmonalis bei einem funfmonatlichen Kinde. *Virchows Arch. Path. Anat.*, **203**:413, 1911.
2. KUZMAN, W. J., YUSKIS, A. S., and CARMICHAEL, D. B.: Anomalous Left Coronary Artery Arising from the Pulmonary Artery. *Amer. Heart J.*, **57**:36, 1959.
3. KEITH, J. D.: The Anomalous Origin of the Left Coronary Artery from the Pulmonary Artery. *Brit. Heart J.*, **21**:149, 1959.
4. SABISTON, D. C., PELARGONIO, S., and TAUSSIG, H. B.: Myocardial Infarction in Infancy. The Surgical Management of a Complication of Congenital Origin of the Left Coronary Artery from the Pulmonary Artery. *J. Thor. Cardio. Surg.*, **40**:321, 1960.
5. GEORGE, J. M. and KNOWLAN, D. M.: Anomalous Origin of the Left Coronary Artery from the Pulmonary Artery in an Adult. *New Engl. J. Med.*, **261**:993, 1959.
6. LAMPE, C. F. J. and VERHEUGT, A. P. M.: Anomalous Left Coronary Artery, Adult Type. *Amer. Heart J.*, **59**:769, 1960.
7. BLAND, E. F., WHITE, P. D., and GARLAND, J.: Congenital Anomalies of the Coronary Arteries: Report of an Unusual Case Associated with Cardiac Hypertrophy. *Amer. Heart J.*, **8**:787, 1933.
8. SWANN, W. C. and WERTHAMMER, S.: Aberrant Coronary Arteries. Experiences in Diagnosis with Report of 3 Cases. *Ann. Intern. Med.*, **42**:873, 1955.
9. EIDLOW, S. and MACKENZIE, E. R.: Anomalous Origin of the Left Coronary Artery from the Pulmonary Artery: Report of a Case Diagnosed Clinically and Confirmed by Necropsy. *Amer. Heart J.*, **32**:243, 1946.
10. GRAYZEL, D. M. and TENNANT, R.: Congenital Atresia of the Tricuspid Orifice and Anomalous Origin of the Coronary Arteries from the Pulmonary Artery. *Amer. J. Path.*, **10**:791, 1934.
11. LIMBOURG, M.: Uber den Ursprung der Kranzarterien des Herzens aus der Arteria pulmonalis. *Beitr. Path. Anat.*, **100**:191, 1937.
12. BROOKS, H. St. J.: Two Cases of an Abnormal Coronary Artery of the Heart Arising from the Pulmonary Artery: With Some Remarks upon the Effect of This Anomaly in Producing Cirroid Dilatation of the Vessels. *J. Anat. Physiol.*, **20**:26, 1886.
13. MONCKBERG, J. G.: Uber eine seltene Anomalie des Koronararterienabgangs. *Zbl. Herz u. Gefasskr.*, **6**:441, 1914.
14. SCHLEY, J.: Abnormer Ursprung der rechten Kranzarterie aus der Pulmonalis bei einem 61 jahrigem. Mann. *Frankf. Z. Path.*, **32**:1, 1925.
15. ROBERTS, J. T. and LOUBE, S. D.: Congenital Single Coronary Artery in Man: Report of Nine New Cases, One Having Thrombosis with Right Ventricular and Atrial (auricular) Infarction. *Amer. Heart J.*, **34**:188, 1947.
16. SMITH, J. C.: Review of Single Coronary Artery with Report of Two Cases. *Circulation*, **1**:1168, 1950.
17. JOHNSON, F. R.: Anoxia as a Cause of Endocardial Fibroelastosis in Infancy. *A.M.A. Arch. Path.*, **54**:237, 1952.
18. ROWE, R. D. and JAMES, L. S.: The Normal Pulmonary Arterial Pressure During the First Year of Life. *J. Pediat.*, **51**:1, 1957.
19. ADAMS, F. H. and LIND, J.: Physiologic Studies on the Cardiovascular Status of Normal Newborn Infants (with special reference to the ductus arteriosus). *Pediatrics*, **19**:431, 1957.
20. EDWARDS, J. E.: Functional Pathology of Congenital Cardiac Disease. *Pediat. Clin. N. Amer.*, **1**:13, 1954.
21. EDWARDS, J. E.: Anomalous Coronary Arteries with Special Reference to Arteriovenous-like Communication. *Circulation*, **17**:1001, 1958.
22. APLEY, J., HORTON, R. E., and WILSON, M. G.: The Possible Role of Surgery in the Treatment of Anomalous Left Coronary Artery. *Thorax*, **12**:28, 1957.
23. DAVIS, C., JR., DILLON, R. F., FELL, E. H., and GASUL, B. M.: Anomalous Coronary Artery Simulating Patent Ductus Arteriosus. *J.A.M.A.*, **160**:1047, 1956.
24. CASE, R. B., MORROW, A. G., STAINSBY, W., and NESTOR, J. O.: Anomalous Origin of the Left Coronary Artery: The Physiologic Defect and Suggested Surgical Treatment. *Circulation*, **17**:1062, 1958.
25. TAUSSIG, H. B.: *Congenital Malformation of the Heart*. Vol. 2. Specific Malformations. The Commonwealth Fund, Cambridge, 1960, p. 873.

26. DiGUGLIELMO, L. and GUTTADAURO, M.: Anatomic Variations in the Coronary Arteries: An Arteriographic Study in Living Subjects. *Acta Radiol.*, **41**:393, 1954.

27. DOMINIGUEZ, P., LENDRUM, B. L., and PICK, A.: False "Coronary Patterns" in the Infant Electrocardiogram. *Circulation*, **19**:409, 1959.

28. ABBOTT, M. E.: Congenital Cardiac Diseases in Osler. *Modern Medicine*, Ed. 3, Philadelphia, Lea & Febiger, 1927, Vol. 4, p. 794.

29. PAUL, R. N. and ROBBINS, S. G.: A Surgical Treatment Proposed for Either Endo-

cardial Fibroelastosis or Anomalous Left Coronary Artery. *Pediatrics*, **16**:147, 1955.

30. GASUL, B. M. and LOEFFLER, E.: Anomalous Origin of the Left Coronary Artery from the Pulmonary Artery. (Bland-White-Garland Syndrome): Report of 4 cases. *Pediatrics*, **4**:498, 1949.

31. KITTLE, C. F., DIEHL, A. H., and HEILBRUNN, A.: Anomalous Left Coronary Artery Arising from the Pulmonary Artery. *J. Pediat.*, **47**:198, 1955.

32. MUSTARD, W. T. Cited in Keith 3.

Competent experienced surgical fitters in attendance



*Serving the medical profession
for over a third of a century*

Equipment and Supplies for the

HOSPITAL	PHYSICIAN
LABORATORY	SURGEON
INDUSTRY	NURSE

Murray-Baumgartner

SURGICAL INSTRUMENT CO., INC.

1421 MARYLAND AVENUE • BALTIMORE 1, MD.

SARATOGA 7-7333



Dean's LETTER

MEDICAL SCHOOL SECTION

Dear Members of the Alumni and Friends:

There is need for a better understanding by the medical profession at large of the needs and problems involved in House Officer education.

The increase in medical knowledge has resulted in a substantial lengthening of the period of medical education. The period of education involved in earning the M.D. Degree must be supplemented by a period of House Officer education, amounting to two to three years for the General Practitioner, and as much as five to seven years in some of the other medical specialties.

The education of the House Officer requires increasing responsibility for patient care as well as other areas of education that increase the fund of knowledge, matures the judgment, and develops the skill of the individual.

The AMA Council on Medical Education and Hospitals and the council on Medical Service in their reports, published October 27, 1962, recognized that "a teaching service composed predominantly of indigent patients no longer serves as the major focus for an approved graduate education program. Patients capable of paying for medical services necessarily are, therefore, becoming of increasing importance to the training of House Officers."

The AMA House of Delegates in June 1961 approved two principles which are equally applicable to house officers and are quoted in part:

2. *Each doctor engaged in the care of the patient is entitled to compensation commensurate with the value of services he has personally rendered.*
3. *No doctor should bill or be paid for a service which he does not perform.*

This action by the AMA House of Delegates has strengthened the conclusion of the Liaison Committee and is concurred in by the parent councils that fees attributable to services provided by House Officers to paying patients should be collected for and allocated solely to the financial support of the graduate training programs, including salaries for House Officers.

The Council on Medical Education and Hospitals and the Council on Medical Services AMA reached agreement on the following eight principles governing the relationship of House Officers to patients for which care compensation is received:

1. The number of patients assigned to house officers shall be limited by the educational needs of the intern and residency program; such patients will continue to be seen by the attending staff physician and ultimate responsibility for their care will remain in his hands.

2. Assignment of responsibility to house officers for the care of patients shall be based on their competence to assume this responsibility.
3. Paying patients should be assigned to the house staff by the attending physician only with the knowledge and consent of the patients concerned.
4. When the house staff has such assigned role in the medical care of paying patients, all applicable fees shall be collected and shall be deposited in a special fund.
5. The special fund shall be administered by a committee of the attending staff.
6. The fund shall be used exclusively in support of intern and resident training programs, including salaries for *house officers*.
7. The fund shall not be used for support of the general operations of a hospital, medical school, university, or welfare department.
8. Compensation arising from this fund for any individual intern or resident shall not be related directly to fees collected for the services rendered by him.

The University of Maryland Medical School and University Hospital has been governed by these principles during the past seven years.

The operating cost and income related to the House Officer Education Program for University Hospital for the current period will be as follows:

<i>Direct Operating Expense</i>	\$847,375.00
Faculty-School of Medicine Estimated costs	
attributed to House Officer Program....	\$325,735.00
Cash Salaries (161 House Officers).....	467,938.00
Parking	20,385.00
Uniforms	19,000.00
Laundry	8,200.00
Health Care	6,117.00

Direct Income from third party payments (Blue Shield etc.) involved in these costs was \$74,123.79. It was derived from the following House Officer departmental earnings:

Obstetrics-Gynecology	\$24,720.12
Psychiatry	7,756.00
Pediatrics	3,210.00
Medicine	7,826.97
Surgery	29,696.70
Ophthalmology	914.00

It should be obvious from these figures that the House Officer Education Program is subsidized by University Hospital and the Medical School; its cost is approximately \$5,263.00 per house officer and that earnings from third party payments for patients' services rendered by House Officers are only about 8% of the operating costs of the program; that these earnings do not constitute an unfair competition with the private practice of medicine.

MEDICAL SCHOOL SECTION

It is believed from cost studies that the professional services rendered by house officers to indigent patients does not fully offset the costs of the house officer education program.

It is also known that the professional services rendered by house officers to private patients of the attending staff constitutes an important service for which the private physician is paid. The only reimbursement to the house officer for these services is the educational effort of the private physician for the house officers that attend his private patients. Whether or not this educational reimbursement is adequate or represents exploitation can vary depending upon the roles played by the private physician and the house officer.

There would seem to be some evidence in support of the thesis that the private physician should pay a greater part of the income of the house officer attending his private patients. This is recognized by the Councils of the AMA.

There appears to be no exploitation of house officers by the Medical School or University Hospital and no question involving the corporate practice of medicine.

Sincerely,

WILLIAM S. STONE, M.D.
Dean

Tuesday Noon Conferences Inaugurated

A NEW FEATURE of the postgraduate teaching program of the School of Medicine has been the development of noon conferences in various medical disciplines and applied basic science. The conferences are held on selective Tuesdays and include a wide variety of subjects. The schedule for the remaining portion of the 1962-63 academic year is listed below. The BULLETIN will carry notices of the 1963-64 schedule well in advance.

March 19 DR. SEYMOUR S. KETY,
*Chief of the Laboratory
of Clinical Science, Na-
tional Institute of Mental
Health.*

"Biochemical Control
of Behavior"

April 9 DR. WILLIAM J. DARBY,
*Department of Biochem-
istry, Vanderbilt Univer-
sity School of Medicine.*

"Nutritional Aspects
of Disease"

April 23 DR. VICTOR A. MCKU-
SICK, *Associate Professor
of Medicine, Johns Hop-
kins Hospital*

"Genetic Factors in
Systemic Diseases"

Curriculum Study to Be Made

FOR A NUMBER of years, the medical faculty has devoted considerable effort to the development of the curriculum at this Medical School. The goal has been to achieve continuous improvement in the curricular experience of the medical student. This interest coincides with a great nationwide movement to evaluate present undergraduate medical education. We have studied the minor and major changes in curriculum that have

been developed in other medical schools. Before considering further changes in the curriculum at this Medical School, it is important for us to consider our present curriculum in terms of this School's educational objectives. Adjustments and changes in our present curriculum should be considered only after an appropriate reappraisal of our present program.

The University of Maryland is fortunate in having been selected by the Association of American Medical Colleges (AAMC), as the site for the second Intramural Seminar on Medical Education.

For a number of years, the AAMC has sponsored seminars on Medical Teaching. These have been held annually in Chicago under the direction of Dr. George Miller, Associate Professor of Medicine and Director of Research in Medical Education at the University of Illinois College of Medicine. Participants in these seminars have included representatives from most of the medical schools in the country. Last year the AAMC decided to change the scope of the seminars and hold the seminar for the faculty of one particular medical school, rather than invite faculty participants from a number of schools. The first such Intramural Seminar was held in 1962 at the University of Kansas Medical School. The second Intramural Seminar will be held for our faculty in June of 1963 and will be of great assistance to us in our deliberations about the curriculum. During the five days of the Seminar, the faculty will explore in some depth the areas of teaching and learning in medical school, and other related topics. For this Seminar we plan to collect, from both medical students and faculty, certain information which will characterize our School in greater detail

and serve as a foundation for the discussions of teaching and learning.

Additional reports about this Seminar will appear in future issues of the BULLETIN.

Drs. Vernon Smith and Rubin Mollary win Hull Award

DRS. VERNON M. SMITH and RUBIN P. MOLLARY of the Mercy Hospital staff have been awarded the Thomas G. Hull Award for their exhibit entitled "Gastro-intestinal Endoscopy: A Valuable Adjunct to Clinical Practice" which was presented at the recent clinical meeting of the American Medical Association held in Los Angeles. The Hull Award consists of a gold medal and a \$250.00 honorarium and is presented for the best exhibit on original medical research for instruction on a medical subject.

1962 Friedenwald Lecture

THE FIFTEENTH ANNUAL Julius Friedenwald Memorial Lecture was held at the School of Medicine on November 20, 1962. The principal address was given by Dr. Gordon McHardy, Professor of Clinical Medicine at Louisiana State University School of Medicine and member of the Browne-McHardy Clinic of New Orleans. Dr. McHardy's subject was, "Medical Aspects of Esophageal Hiatal Hernia."

The Lectureship established in 1942 has included Drs. George Eusterman, of the Mayo Foundation, Frank H. Lahey, Walter C. Alvarez, and Dwight L. Wilbur, of Stanford University.

1962 Pincoffs Lecture

DR. JEROME W. CONN, Professor of Medicine at the University of Michigan Medical Center, was the 6th Maurice C. Pincoffs Lecturer in Medicine, deliver-

ing his address on Primary Aldosteronism on Tuesday, December 11, 1962, at Davidge Hall. Dr. Conn is one of the nation's foremost clinical investigators and has contributed to knowledge of carbohydrate metabolism, diabetes, and disorders of the adrenal glands. In 1954 he described the condition, Primary Aldosteronism (sometimes called "Conn's Syndrome") which is characterized by hypertension and muscle weakness.

Grants

DR. ADELBERT F. SCHUBART, Associate Professor of Medicine and head of the Division of Arthritis, has been awarded \$14,000 by the Maryland Chapter of the Arthritis and Rheumatism Foundation to help support his research for the current year into the cause and treatment of rheumatoid arthritis and other related diseases.

DR. RUSSELL R. MONROE, Professor of Psychiatry, has been awarded a grant of \$217,000 to continue his work on brain-wave patterns resembling epilepsy occurring during outbursts of psychotic behavior. Work is being conducted under the supervision of Dr. Monroe by a rather large research team.

This study was originally begun at Tulane University. Dr. Monroe found that repeated electroencephalographic recordings made during psychotic episodes often show wave forms similar to those found in epilepsy.

DR. CHARLES A. BARRACLOUGH, Associate Professor of Physiology, has received a four-year grant of \$119,254 from the National Institutes of Health to support his study of the basic mechanisms by which the brain regulates reproductive processes. Dr. Barraclough will study the complex hypothalamic-gonadal relationship which is believed to exist.

John Edwin Legge

1875-1962

ON THURSDAY evening, September 20, 1962, Dr. John E. Legge, age 87, and one of Maryland's senior physicians, died after a long illness. Until recently, he practiced medicine and retired only when forced to do so by virtue of his advanced years. Until his retirement, Dr. Legge practiced vigorously and participated in the teaching program of the University of Maryland School of Medicine, holding the faculty rank of Assistant Professor of Medicine.

Born in Oakland, Md., of George W. Legge and Julia C. Offutt, he attended Massey Hall Preparatory School, Fred Wallace's School for Boys, and St. John's College, Annapolis, Md. He was awarded his Medical Degree in 1899 by the University of Maryland School of Medicine. He married Helen Louise Gordon in 1916; there were no children.

Doctor Legge practiced medicine in Oakland for about a decade, and from 1912 to 1922 in Cumberland. After leaving Oakland he undertook postgraduate study in various European Medical Centers, including London, Paris, Berlin, and Vienna. This enthusiasm for keeping abreast of current medical concepts remained with him throughout his career. In 1922 Dr. Legge established an office in Baltimore and remained at the familiar site of 700 Cathedral St. for 22 years. Broadly trained as a clinician, he rendered comprehensive and sympathetic care to patients who were devoted to him.

As an able teacher, Dr. Legge contributed unstintingly to the training of young physicians in the Maryland General, Mercy, Church Home and Infirmary,

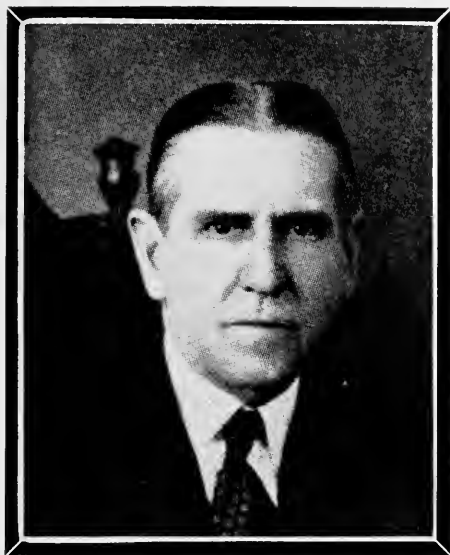
Bon Secours, Women's, Lutheran, and University Hospitals, giving diligent service on the medical wards and outpatient clinics. He had special interests and talents in Cardiology and Pathology. From 1924 to 1955 he rendered the state a vital service as Chief Examiner in Pathology for the State Board of Medical Examiners. He insisted on high standards at all times.

Never one to withhold his own opinions, Dr. Legge expected equal frankness from others. He was a ceaseless student who participated in more than 25 postgraduate conferences or seminars in the leading American Medical Centers. He spoke with pride in having been a student in the last formal course in Cardiology given by Dr. Paul Dudley White at the Massachusetts General Hospital. Information which he gleaned from such sessions was always shared with his associates. Students and associates respected him for his breadth of medical knowledge and his keen powers of observation.

Various societies honored him by membership, the Maryland Medical and Chirurgical Faculty, Baltimore City Medical Society, American Medical Association, Lester Club of Baltimore, and the Anglo-American Associations of Berlin and Vienna. Dr. Legge was a faithful Fellow of the American College of Physicians and a Diplomate of the American Board of Internal Medicine.

The community has lost one of its devoted Christian gentlemen. The Medical Profession and Medical School will remember John Legge as a true physician, who placed the patient's interest before all other considerations. The Faculty expresses sympathy to his family and acknowledges, with gratitude, his contributions to the Hospital and School.

THEODORE E. WOODWARD, M.D.



Francis J. Kirby

DR. FRANCIS J. KIRBY, who died on June 22, 1961, has been appropriately memorialized as an alumnus, surgeon, and practitioner. Dr. Kirby was 95 at the time of his death.

Dr. Nathan E. Needle writes, "Dr. Kirby was a scholar and a gentleman. He was a physician for the body and a healer for the soul. He was a devout believer and a searching student. These were but a few of the many qualities of this beloved physician." Dr. Kirby was a graduate of the Baltimore Medical College in the Class of 1892.

Following a brief residency, he undertook postgraduate work in Germany, France, and Italy, later becoming an Instructor in Surgery at the College of Physicians and Surgeons, working with the late Professor Tiffany.

Throughout his career he was closely associated with the St. Joseph's Hospital and assisted that institution in its development. He dearly loved surgical ward teaching and was responsible for the training of many prominent surgeons. Dr. Kirby was a charter member of the American College of Surgeons. He was awarded an Honorary Degree by Loyola College and was a charter member of the Flint Club. He was given many honors by the Knights of Columbus.

Dr. Kirby was on the consulting staff of most of the Baltimore hospitals and served actively in the Department of Surgery of the St. Joseph's, Bon Secours, and Mercy Hospitals.

BOOK REVIEWS

Combined Textbook of Obstetrics and Gynaecology. Edited by Sir Dugald Baird, M.D. 7th Ed. Pp. 975. W. & S. Livingstone, London and distributed in the U. S. by The Williams & Wilkins Co., Baltimore, Md. 1962.

In this edition the authors attempt to once again bring the specialty of Obstetrics and Gynecology up to date for the medical student and general practitioner. In this respect, I feel that they have presented in a concise and explicit manner, a generally successful textbook.

It is a monumental task to encompass the entire specialty of Obstetrics and Gynecology in one book. Presentation, therefore, in most instances is free of wordiness and to the point, allowing for very easy reading with an excellent index for quick references to the various topics. There are 489 illustrations noted throughout the book to further clarify all of the subjects of discussion. These illustrations, mostly in black and white, meet the requirements of a good textbook.

Because of the vast nature of the subject matter, my one criticism is a tendency in some instances to be too brief; *i.e.*, Hypofibrinogenemia is discussed only in a superficial manner. No mention is made of hormonal therapy of endometriosis, and the section on operative Gynecology is relatively scant.

Nevertheless, as one reads the book, it is obvious that the authors are writing as a result of a vast experience in the field of Obstetrics and Gynecology and consequently the overall quality of the book accomplishes their intended purpose.

NORMAN LEVIN, M.D.

Tumor Viruses of Murine Origin. Ciba Foundation Symposium, ed. by Wolstenholme, G. E. W. and O'Connor, M. Little, Brown & Co., Boston, Mass. 1962.

Mammary carcinoma (Bittner), mouse leukemia, and polyoma virus are the murine tumor types discussed in detail in this symposium. However, this symposium is not only a highly concentrated collection of data and theory con-

cerning these specific virus-tumor entities, but contains as well speculations concerning the broader aspects of carcinogenesis with not infrequent reference to human cancer.

Of interest to this reviewer were several features brought out by more than one contributor to the symposium. In the first instance were the observations of Bernhard, who summarized the morphologic differences, which the electron microscope permits, between oncogenic and non-oncogenic mouse viruses. Although it would appear that confusion between these two groups of viruses sometimes exist, the morphology of these two groups is such that they may be usually distinguished with fair ease. A second important point, noted by both Bernhard and Moore, described "virus particles" in non-tumorous mammary tissue in "high cancer strain" mice as well as in hyperplastic nodules of mammary tissue, but not in mice of low cancer strains. The importance of the latter point seems to be that proliferation of virus occurs in the cell prior to its morphologic identification as a cancer cell.

While it was pointed out by a number of contributors that the tumor virus is in many respects a unique type of virus, it was also observed by Heubner that, at least with respect to the polyoma virus, this may be a highly ubiquitous virus, found in abundance in rural grain storage areas. Heubner also showed that, while the polyoma virus is frequently found, only a small percentage of mice develop tumors associated with the polyoma virus. Obviously, other influencing factors are necessary. Furth demonstrated the important influence of mammotropins on the production of mammary cancer in mice. These hormones are essential to the development of the carcinoma where the virus mammotropin alone would not cause the development of a neoplasm. Similarly, the thymic lymphoma virus produces a very low leukemia incidence in RF mice, but when X-irradiated, these virus-infected mice would triple the incidence of myeloid leukemia. Thus, Furth observes that both tumor producing viruses as well as latent cancer cells are compatible with the normal life of the individual.

Another instance of the variable behavior of tumor viruses was demonstrated by Ham,

where polyoma virus was inoculated into newborn hamsters. First, a transitory necrotizing lesion of the kidney was produced from which virus was recovered. This gave way to a renal malignancy in which one was unable to demonstrate virus. Two factors appear important in this particular observation: age and size of inoculum. The animals must be newborn. A low inoculum results in nodular tumors which develop at a more leisurely pace, while a high inoculum results in rapid and diffuse tumor development.

With the observation that animals may be inoculated with a tumor-virus at birth, or received the virus from the mother across the placenta, one wonders about the importance of antibody in the establishment of a tumor-virus in a new host. Only newborn mice may be infected by certain of these agents, perhaps reflecting the inability of the newborn to respond to antigenic stimuli. Stuart, however, demonstrated tumors produced by the polyoma virus may progress in spite of high antibody titer, either actively or passively achieved. On the other hand, tumors may be prevented in newborn mice by the administration of antibodies as little as one-half hour prior to the inoculation of the virus. No amount of inoculated antibody will avail to prevent the establishment of a tumor following the inoculation of a virus. It was also repeatedly observed throughout the seminar that many animals which show antibody are those which apparently resisted tumor induction, whereas those animals which possess tumors often show little antibody response to the tumor-inducing virus.

No new critical data was presented which shows the mechanism of carcinogenesis through virus infection. Of great importance, however, is the observation that known tumor-viruses in mice may result in neoplasms in which the virus is lost to recognition. This may mean that the virus is indeed lost, has become latent, or enters a state which is comparable to that of a lyogenic bacteriophage. If the latter occurs, it should be possible to reactivate the "lyogenic" virus in tumor cells by similar methods that one reactivates a lyogenic bacteriophage. Sacks was unable to do this with tissue culture cells transformed by polyoma virus, using irradiation of the transformed cells to reactivate the virus. Thus it was suggested that continuing malignancy, in this system, could occur in the absence of evidence of virus production or a virus potential.

This symposium lives up to the previous high standards of other Ciba Foundation Symposia. It is especially valuable as a result of the careful editing of the discussions following the scientific presentations. For the student of tumor-viruses, it is an essential reference and for the young investigator beginning his studies of tumor-viruses, it represents a good review and summary of the present state of knowledge of murine tumor viruses and allows him to see the direction of thought expressed by these outstanding contributors to cancer investigation.

ROBERT B. SCHULTZ, M.D.

A Histology of the Body Tissues. 2nd ed. Margaret Gillison. The Williams & Wilkins Co., Baltimore, Md. 1962. \$5.00.

An attempt is made by the author to correlate the structure of tissues with their physiological properties. In this aspect the author is fairly successful. For example, the structure and composition of blood are correlated with its reactions and functions. However, these correlations, from a medical student's point of view, are much too superficial. The author describes the tissue structure and merely mentions its function avoiding any detailed discussion.

The introduction to the book and the second chapter, "The Examination of Tissues," are particularly good for the novice to read since they cover the general scope of histology and microscopic study. The author also indicates many of the tissue and cellular artefacts that occur with fixation.

It seems to this reviewer that the greatest weakness of this book is that it fails to encompass the total field of histology. The major organs are only lightly touched upon in the general discussion of muscle and supporting tissue. The details of the structure of the liver, spleen, and gastrointestinal tract are not dealt with at any great length.

The chapters on muscle and nervous tissues are more thorough and informative than the others and were probably written with the physical therapy student in mind.

In short, as far as the medical student is concerned, this book would serve well as an introduction to histology but could not replace such basic textbooks as Ham's "Histology" and Maximow and Bloom.

MIRIAM COHEN

Clinical Pathology: Application & Interpretation. 3rd ed. Benjamin B. Wells, M.D. Pp. 541. W. B. Saunders Co., Philadelphia, Pa. 1962.

This compact text has for its purpose the presentation of the various applications and interpretations of clinical laboratory studies employed by students and practitioners of medicine in diagnosis and therapy of disease entities. In the words of Dr. Wells, "The material is arranged exactly as the physician uses it. Beginning with a clinical problem, useful laboratory tests are named and discussed. Just enough theory and methodology are included to give proper meaning to the procedures or to define their limitations."

The orientation of the author is rewardingly practical and predominately clinical in his consideration of diagnostic problems, so that the correlation of laboratory studies with patient management is simplified to an unusual degree.

The introduction of the book advises the reader that, "Correct evaluation of any patient means a skillful blending of history, physical and laboratory examinations or a wise selection among the three. . . . A physician who depends on the laboratory to make his diagnosis is probably inexperienced; one who says that he does not need a laboratory is uninformed. In either instance the patient is in danger."

In brief, this is not a book for the clinical pathologist or the seasoned medical technologist who might seek much finer detail in the methodology of the laboratory tests presented; however, the student or physician who wants to know whether a particular test is applied to whole blood, plasma or serum, what precautions are to be used in drawing the specimen and in sending it to the laboratory, what preservative, if any, is necessary, or how to relieve the pt. of multiple venipuncture or other uncomfortable procedures will be amply rewarded by readily finding the answers to these everyday problems in Dr. Wells' book.

WILLIAM WEGLIICKI, M.D.

Typhoid Fever and Other Salmonella Infections. R. L. Huckstep. Pp. 336, 69 ill. E. & S. Livingstone, Ltd., Edinburgh, 1962.

On encountering large numbers of typhoid fever patients in East Africa, Dr. Huckstep took advantage of an opportunity often faced, but neglected by others. He has made painstaking observations and in so doing described practical methods for treating patients under hospital and primitive conditions. The monograph is well organized in sections devoted to general aspects, Diagnoses, Prophylaxes, Treatment, Complications, certain Specific Aspects and an index making it easy to find pertinent information. Moreover, he describes the significant clinical and laboratory features, diagnostic methods, practical comments pertaining to differential diagnoses in a hospital environment and under less ideal situations. Management of such serious complications as intestinal perforation, hemorrhage and relapse receive proper attention.

A practical approach to supportive care and fluid replacement includes a description of intraperitoneal administration. Several regimens of chloramphenicol usage were employed effectively. Dr. Huckstep presents data on 23 patients which confirms earlier reports that medical and *not* surgical management is advisable in typhoid patient with intestinal perforation and peritonitis.

This comprehensive monograph suggests limited efficacy of T. A. B. vaccine. The typhoid carrier problem and other salmonella infections are given brief coverage.

The author has presented the material concisely and provided many descriptive illustrations. This is not an encyclopedic treatise on typhoid: details relative to immunologic changes, pathologic findings, or physiologic abnormalities are only briefly described. The book is an excellent reference for physicians who must diagnose and treat typhoid patients, and for the clinician who wishes to learn the current status of salmonella infections.

THEODORE E. WOODWARD, M.D.



OFFICERS

President

GEORGE H. YEAGER, M.D.

President-Elect

GIBSON J. WELLS, M.D.

Vice-Presidents

WYLIE M. FAW, JR., M.D.

PHILIP A. INSLEY, M.D.

HUGH W. WARD, M.D.

Secretary

FRANCIS J. BORGES, M.D.

Treasurer

HOWARD B. MAYS, M.D.

Executive Director

WILLIAM H. TRIPLETT, M.D.

Executive Secretary

MRS. LOUISE GIRKIN

Board of Directors

C. PARKE SCARBOROUGH, M.D.

EDWARD F. COTTER, M.D.

LAWRENCE M. SERRA, M.D.

RAMSEY B. THOMAS, M.D.

THEODORE E. WOODWARD, M.D.

F. FORD LOKER, M.D.

NATHAN E. NEEDLE, M.D.

HOAROLD P. BIEHL, M.D.

RENNERT M. SMELSER, M.D.

JOSEPH D'ANTONIO, M.D.

FRANK K. MORRIS, M.D.

(ex-officio)

ARTHUR G. SIWINSKI, M.D.

(ex-officio)

Nominating Committee

ARTHUR G. SIWINSKI, M.D.

FRANK K. MORRIS, M.D.

PATRICK PHELAN, M.D.

AARON C. SOLLOD, M.D.

J. KING B. E. SEEGAR, M.D.

Representatives to General Alumni Council

ARTHUR G. SIWINSKI, M.D.

FRANK K. MORRIS, M.D.

WILLIAM H. TRIPLETT, M.D.

Representatives, Editorial Board, Bulletin

JOHN HORNBAKER, M.D.

HARRY M. ROBINSON, JR., M.D.

C. VERNON WILLIAMSON, M.D.

GEORGE H. YEAGER, M.D.

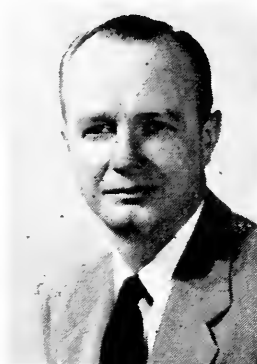
(ex-officio)

Representatives, Advisory Board, Faculty

FRANK K. MORRIS, M.D.

ARTHUR G. SIWINSKI, M.D.

ALUMNI ASSOCIATION SECTION



President's Letter

Dear Members:

There are now seven recognized professional schools on the Baltimore Campus. Student enrollment of these combined schools is substantial and is expanding. To meet increased teaching requirements, there have been many faculty additions.

The Baltimore Campus now has a Student Union. This represents an extremely desirable step forward, from the viewpoint of student amenities, housing, and atmosphere. From the Faculty point of view, nothing has been done to produce or enhance an academic environment. Perhaps future planning has taken this into consideration but, unfortunately, future planning sometimes takes on the semblance of a vacuum, entailing an indefinite number of years.

With the completion of the urban renewal program, involving demolition of adjacent blocks of buildings now within the Campus environment, the few small restaurants, or more properly "eating houses," will go. This means that the Faculty will of necessity eat in the hospital, the Student Union, or walk some distance, if they prefer a quieter and more attractive lunch or dinner environment.

It is my opinion that there is an urgent need to establish a *Faculty Club* on the Baltimore Campus. This facility should represent the combined efforts of and should fulfill the needs of all of the professional schools. Certainly land could be made available for such a worthy project. Financing should not offer a serious problem.

May I urge that the respective Deans of the Baltimore Campus schools, and the respective Faculty Senates, join together with the hope that a worthwhile Faculty

Club can be developed. Such a club should be run as an independent agency and indirectly under the control of University authorities. Such a Faculty Club should preferably contain private dining room facilities, in addition to a general dining room. If rooms for visitors could be included, there would be many advantages. An additional asset, such as pool tables and a bowling alley, would be greeted with much enthusiasm by the majority of Faculty members.

Perhaps, if the schools could persuade the proper University officials of the necessity for such a club, a way could be found to finance it through a bond issue, similar to the procedure for establishing a Student Union and some of the College Park dormitories.

Sincerely yours,

GEORGE H. YEAGER, M.D.
President



Successful Reception at Southern Medical Meeting

UNDER THE CAPABLE leadership of Drs. James and Phyllis Vaughn, more than 56 alumni and guests were entertained at the buffet and cocktail party on the occasion of the Southern Medical Association Meeting held at Miami Beach.

The reception which took place at the Roney Plaza was on November 13. Speakers included Dr. Raymond C. V. Robinson, Southern Medical Association Connseilor, and Dr. J. Morris Reese of the Medical Faculty. Dr. Vaughn read a letter from Dr. William S. Stone, Dean of the School of Medicine. The following alumni attended:

■

Dr. & Mrs. Frank Kasik	Dr. & Mrs. G. H. Yeager
Dr. Eugene Bereston	Dr. & Mrs. Roberts
Drs. Charles & Kathleen McGrady	Dr. & Mrs. Dunseath
Dr. & Mrs. Frank Kaltreider	Dr. & Mrs. R. W. Richardson
Dr. George Schmitt	Dr. B. S. Jones
Dr. & Mrs. E. W. Stevenson	Dr. & Mrs. J. J. Range
Dr. & Mrs. Henry D. Perry, Jr.	Dr. & Mrs. Daniel Stone
Dr. & Mrs. F. Allan Holden	Dr. & Mrs. Eli Galitz
Dr. & Mrs. R. C. Vail Robinson	Dr. & Mrs. R. R. Mirow
Dr. & Mrs. John A. Wagner	Dr. Kramer
Dr. & Mrs. H. W. Lapp	Dr. R. L. Levine
Dr. & Mrs. S. L. Fox	Dr. E. E. Lindstrom
Dr. M. Reese	Dr. & Mrs. G. LeVan
Dr. & Mrs. Robert Bauer	Dr. & Mrs. Dobihal
Dr. Robert Hopkins	Dr. & Mrs. C. Goodhand
	Drs. James & Phyllis P. Vaughn
	Mrs. Hopkins
	Mrs. Friedman



A fine buffet!

Camera Views
Medical Alumni Reception
Roney Plaza Hotel
Miami Beach, Florida
November 13, 1962
Southern Medical Association Meeting



Dr. R. C. Vail Robinson addresses SMA Alumni gathering.

Dr. Freicus and Dr. Reese.

Drs. James and Phyllis Vaughn talk with Mr. Eric Lindstrom (left), U of M senior who was a guest at the SMA Convention.



Left—Dr. and Mrs. Robert Bauer, Right—Dr. and Mrs. J. J. Range.

Dr. J. Morris Reese and Dr. Daniel Stone of Miami Beach.



50-Year Graduates to Be Honored

THE FOLLOWING MEMBERS of the Classes of 1913 will be honored at the exercises and will receive their 50-year Certificates from Dr. George H. Yeager, President of the Medical Alumni Association.

College of Physicians & Surgeons

RAFAEL BERNABE, M.D.
RAY MAXWELL BOBBITT, M.D.
RALPH ELIJA CLOWARD, M.D.
JAMES SYLVESTER DIXON, M.D.
JAMES CORBIN DOUGHTY, M.D.
JAMES FENDER EASTON, M.D.
SAMUEL E. ENFIELD, M.D.
CHAS. WM. FINNERTY, M.D.
PAUL N. FLEMING, M.D.
ERNEST F. FLORA, M.D.
BENJAMIN F. GALLANT, M.D.
E. F. HARBERT, M.D.
ISIDOR HELLER, M.D.
FERNANDO H. JANER, M.D.
WILLIAM T. MAY, M.D.
CHARLES L. MOWRER, M.D.
LEO P. MUSSER, M.D.
WILLIAM EDGAR MYLES, M.D.
CHARLES FRANCIS NICOL, M.D.
CHARLES MANLEY PETERS, M.D.
WALTER W. POINT, M.D.
SOLOMON REINA, M.D.
RAYMOND HARRISON RYDER, M.D.
ARMADO SANCHEZ, M.D.
ELIAS C. SEGARRA, M.D.
ALEXANDER SENEKEWITZ, M.D.
FORT STEILACOOM, M.D.

Baltimore Medical College

CHARLES F. BOVE, M.D.
DAWSON L. FARBER, M.D.
LYMAN WINDLEY GAY-LORD
ENRIQUE LASSISSE Y RIVERA, M.D.
CHARLES B. LEONE, M.D.
ERNEST G. MARR, M.D.
JAMES B. MORRISON, M.D.
VICTOR C. NAH, M.D.
GEORGE PINESS, M.D.
EDWARDS M. RILEY, M.D.
WILLIAM M. RILEY, M.D.

ROGER K. SELL, M.D.
GRAVER A. SILLIMAN
MAX KAUFMAN SILVERMAN, M.D.
GEORGE L. ZIMMERMAN, M.D.

University of Maryland

SAMUEL ALLEN ALEXANDER, M.D.
PHILIP BEAN, M.D.
HUMPHREY WM. BUTLER, M.D.
FRANKLIN CLYDE CRAVEN, M.D.
CHARLES REID EDWARDS, M.D.
VERTIE EDWARD EDWARDS, M.D.
IDELBERTO FAJARDO INFANTE, M.D.
W. FRANK GEMMILL, M.D.
HARRY GOLDSMITH, M.D.
LEONARD HAYS, M.D.
GERARD HENRY LEBRET, M.D.
HERMAN HARRY LEVIN, M.D.
FREDERICK L. McDANIEL, M.D.
WILLIAM TILLMAN MARTIN, M.D.
FRANKLIN DASHIELL MURPHY, M.D.
WALTER ANTHONY OSTENDORF, M.D.
HERMAN M. PEREZ Y QUINTANA, M.D.
JESUS MARIA BUCH Y PORTUOGONDO, M.D.
HARRY CORNELIUS RAYSOR, M.D.
WILLIAM H. SCRUGGS, M.D.
GERALD CLYDE SHULER, M.D.
WM. WALTER SIRAK, M.D.
HAMILTON J. SLUCHER, M.D.
W. H. TOULSON, M.D.
CLEVELAND D. WHELCHER, M.D.



Dr. Krause To Receive 1963 Alumni Honor Award

DR. LOUIS A. M. KRAUSE of the Class of 1917 has been nominated recipient of the Alumni Honor Award and Gold Key for 1963. The award will be made on the occasion of the annual alumni meeting during the first week of June. Additional information will be forthcoming in the April, 1963 BULLETIN.

MINUTES OF MEETING OF BOARD OF DIRECTORS OF MEDICAL ALUMNI ASSOCIATION

September 25, 1962

The meeting was called to order by the president, Dr. George H. Yeager. The treasurer, Dr. Mays, reported \$18,-418.65 in the treasury divided among the checking account, the savings account, and the Student Loan Fund. Dr. Yeager reported on the disappointing reply from Mr. Morrison regarding our Alumni Day parking space. Inadequate parking space does much to discourage Alumni Day attendance and is a discourtesy to the alumni. Plans were made for inviting the wives of the physicians who are to receive certificates for 50 years service to future Alumni Day luncheons.

Dr. James A. Vaughn, Jr., of Coral Gables, Florida, is to host the University of Maryland alumni meeting to be held in conjunction with the Southern Medical Association at the Roney Plaza in Miami Beach, Florida.

Dr. Yeager discussed plans for the joint meeting of the Alumni Association with the University Hospital Surgical, Medical, Ob-Gyn Associations and the Pediatric Seminar group. This meeting is to take place on Friday, May 8, 1964, and hotel accommodations and banquet arrangements have been made with the Lord Baltimore Hotel.

Dr. Wells reported that the Student Loan Committee had made one loan of \$400 since Alumni Day, June, 1962.

October 23, 1962

Dr. George Yeager presented Dr. Wagner as guest for the evening. Dr.

Wagner presented his views for improving and expanding the BULLETIN. He emphasized a need for a re-survey of the Editorial Board, requesting an active staff. He made a plea for increased financial support for the BULLETIN.

The Board of Directors acknowledged the gift of \$35.00 to the Student Loan Fund from Dr. Frank Morris. The Board agreed to request from each alumnus a small financial donation for the Student Loan Fund. This request is to be included in the bill for alumni dues. There was considerable discussion regarding the inadvertent diversion of alumni dues funds to the General University of Maryland Alumni Fund. The Board wishes to emphasize that medical alumni dues should be paid directly to the Medical Alumni Association.

Class Reunion Captains for Alumni Day, June, 1963, are as follows:

1913	Dr. W. H. Toulson, Dr. Charles Reid Edwards, Co-Chairmen	50th Reunion
1918	Dr. William A. Darby	45th
1923	Dr. Fred T. Kyper	40th
1928	Dr. Jack Jerome Singer	35th
1933	Dr. Leon Kochman	30th
1938	Dr. & Mrs. T. E. Wood- ward, Dr. Sidney Scherlis, Co-Chairmen	25th
1943	Dr. Irving Scherlis	20th
1948	Dr. Fred R. McCrumb	15th
1953	Dr. Robert T. Singleton	10th
1958	Dr. Stuart Brager	5th

January, 1963

Class

NOTES

ELSEWHERE in this edition you will find a "tear out" page, for reporting *Alumni News* to the BULLETIN. This is not an idle gesture.

Your achievements, fellow alumnus, are of interest to your classmates. They constitute a reward to the faculty, are a challenge to the younger physicians, and are an item of prestige for the University. Please cooperate with us by forwarding news of yourself or any alumnus to the BULLETIN. Thank you.

Regional Assistant Editors Needed

THE BULLETIN needs assistant editors for news of alumni strategically located throughout the United States and the world in general. In the "Class News" section, much important news concerning achievements of the far flung alumni of the School of Medicine goes unnoticed mainly because local notices are not sent to the editor.

We ask for volunteers to serve in this capacity. If you know of an alumnus whose activities might serve the interests of this important section of the BULLETIN, you will do us a favor by sending his name to the Editor.

We need better and more complete alumni news coverage. We ask your assistance.

BMC Class of 1907

Fred E. Steele, Jr., of 89 N. Maple St., Florence, Mass., writes that he is quite active at age 80 and invites correspondence.

Class of 1923

Henry Weinert, who practices general surgery in Passaic, N. J., was a visitor to the campus on November 23, 1962.

Class of 1938

Harry Kelmenson has announced the removal of his office to the Latrobe Building, 2 E. Read St.

Donald J. Silverman of 1815 11th Ave., South, Birmingham 5, Ala., has been elected to the Executive Committee of the medical staff of the Children's Hospital in Birmingham, Ala. Dr. Silverman is also President-elect of the medical staff of the same hospital and will succeed to the title of President on January 1, 1964.

Class of 1943

Alberto Adami, who practices thoracic surgery in Philadelphia, currently serves as instructor in surgery on the staff of the Hahnemann Medical College and Hospital in Philadelphia.

Augustus (Gus) Frey, Jr., is engaged in the practice of orthopedic surgery with offices in the Interstate Building, Chattanooga, Tenn.

Richard Garrett, who practices general surgery in Montgomery, Ala., attended the Southern Medical Association meeting in Miami during November, 1962.

Class of 1946

E. P. Smith (Lieut. Col., USAF, MC) who serves as Deputy Commander at the Clark Air Force Base Hospital in Manila, writes: "When I arrived at the Clark Air Base in the Philippines, I was happy to find Col. John Rizzolo of the

Deaths

Class of 1938 commanding the hospital. I am the deputy Commander and Chief of Professional Services. We have a 200-bed hospital which supports not only the personnel at Clark Air Base, but is the specialty center for all the Southeast Asia area. At the present time, a brand new hospital is being constructed and we expect to move in within the next nine months. A picture of the artist's conception of what the new hospital will look like is enclosed."

Class of 1951

Robert Hopkins, formerly a general practitioner in Erie, Pa., has joined the Dade County (Florida) Dept. of Health where he is engaged in research in epidemiology. Dr. Hopkins' offices are in Miami.

Class of 1958

Captain Meredith S. Hale (MC) is currently assigned to the Letterman General Hospital in San Francisco, California. Captain Hale lives at 26 Seamast Passage, Corte Madera, Calif.

B. M. C. Class of 1892

H. LeGette Baker of Hemingway, S. C., died on April 24, 1962, aged 91.

P & S Class of 1892

George O'Hanlon, of R. D. 1, Elmira, N. Y., died at the age of 92 on June 26, 1962.

Class of 1892

Leonard B. Johnson celebrated his 96th birthday on June 9 and died at his home, Schiercliffe Manor in Organza (St. Mary's County), Md., on Tuesday, November 27, 1962.

Known for his charity and philanthropy, Dr. Johnson never turned away a patient because of inability to pay. Among his chief concerns was the welfare and education of young people. He reared two foster sons, one of whom graduated from the United States Military Academy and the second became an attorney. He was also instrumental in the formation of the Maryland Tobacco Growers Association in the 1920's and served as a Director in the organization for many years.

Class of 1897

George G. Lovett, of Kennau, W. Va., died on June 11, 1962. Dr. Lovett was 92.

P & S Class of 1898

Joseph F. Buquoi, of 7030 Louis XIV St., Lakeview, New Orleans, La., died in November, 1961.

B. M. C. Class of 1900

J. S. Buffalo of Garner, N. C., died at the age of 90 on August 2, 1962.

Class of 1904

Charles Llewellyn Owens of 122 S. Center St., Cumberland, Md., died July 6, 1962. Dr. Owens was 84.

B. M. C. Class of 1905

Saverio Agnelli of New York City, died June 17, 1962. Dr. Agnelli was 88.

Class of 1905

James Green Mathews died at his home in Spokane, Wash., November 11, 1962. Dr. Mathews was 81.

Following his graduation from the University of Maryland, Dr. Mathews came to Spokane 55 years ago, where he was associated with his brother, the late Dr. A. A. Mathews, who also practiced general surgery.

Class of 1908

James Lounsberry Collard of Belchertown, Mass., died May 27, 1962. Dr. Collard was 80.

Class of 1909

Neale S. Stirewalt of 703 East Lexington Ave., High Point, N. C., died on August 1, 1962. Dr. Stirewalt was 80.

Born on March 7, 1882, in Concord in Cabarrus County (North Carolina), he attended the Statesville schools and received his A.B. Degree in 1905 from Davidson College. Following his graduation from the University of Maryland, he entered private practice in York County, S. C., where he remained active until 1914. In 1928 he moved to High

Point, where he opened a private practice that was to continue for more than 34 years. He was a member of the Staff of High Point Memorial Hospital and in 1959 was honored by a testimonial dinner by the staff of that hospital on the occasion of the completion of 50 years of medical service. He had been medical director for Pilot Life Insurance Co., served two years as an officer in the Army Medical Corps during World War I, and was a member of the Guilford Medical Society.

Alfred Chase Trull of 3 Washington Square, Haverhill, Mass., died May 7, 1962. Dr. Trull was 87.

P & S Class of 1912

James Edward Wilson of 40 E. Pike St., Canonsburg, Pa., died recently.

Class of 1918

John Stafford McDowell of 22 Greenwood St., Canisteo, N. Y., died recently.

Class of 1921

Daniel Keegan of Garden City, Long Island, died on November 13, 1962.

Class of 1925

Joseph Ralph Simon of 3400 Forbes St., Pittsburgh, Pa., died at the age of 59 on May 17, 1962.

Michele Tomaiuolo of 19 17th Street, North Bergen, N. J., died at the age of 63 on July 12, 1962.

Class of 1932

Harold Gorenberg of 55 Bentley Ave., Jersey City, N. J., died July 15, 1962. Dr. Gorenberg was 54.

PLEASE TEAR OUT

ALUMNI NEWS REPORT

TO THE BULLETIN:

I would like to report the following:

SUGGESTIONS FOR NEWS ITEMS

American Board Certification
Change of Address
Change of Office
Residency Appointment
Research Completed
News of Another Alumnus
Academic Appointment
Interesting Historic Photographs

Name _____

Address _____

Class _____

Send to

Bulletin—School of Medicine
University of Maryland
31 S. Greene St.
Baltimore 1, Md.

YOUR SCHOOL
NEEDS
YOUR A. M. E. F.
CONTRIBUTION

Mail Check to:

American Medical Education Foundation

535 N. Dearborn St.

Chicago 10, Ill.

BULLETIN *School of Medicine*

University of Maryland

VOLUME 48

APRIL, 1963

NUMBER 2

Anesthesia Induced by Emulsions of Volatile Anesthetics

JOHN C. KRANTZ, JR. and HELMUT F. CASCORBI

SINCE THE INTRODUCTION of ether and chloroform as inhalation anesthetics more than a century ago, there have been several attempts to administer these agents intravenously in aqueous solution (Burkhardt¹). The procedure was fraught with many difficulties. Foremost among the problems encountered was the low degree of solubility of the anesthetics in normal salt solution, thus necessitating the injection of large volumes of fluid to maintain anesthesia. Other difficulties involved were hemolysis of red cells, pulmonary edema, and thrombosis of the vein at the injection site.

Our experience with hexafluoro-diethyl ether by intravenous injection in the treatment of mentally ill patients prompted us to attempt the injection of volatile anesthetic agents.² All of our efforts with a variety of well established anesthetic agents in different solvents were unsatisfactory. It then occurred to us to emulsify the anesthetic and proceed with animal studies. A large variety of emulsions with many types of emulsifying agents and anesthetics were prepared. The most satisfactory product was prepared with the anesthetic 1, 1-di-

fluoro-2, 2-dichlorethyl methyl ether (methoxyflurane) used for inhalation anesthesia.³ The composition of the emulsion is shown in the following formula:

Methoxyflurane	3.5 ml.
Lecithin (soy bean)	100 mg. ⁴
Dextrose	4.2 Gm.
Pluronic F 68*	0.25 Gm.
Cotton seed oil	3.0 ml.
Water for injection	sufficient to make 100 ml.

The emulsion is stable at least over several months. It permits sterilization without separation. It is devoid of pyrogens. A particle size analysis demonstrated that the anesthetic-oil particle ranged from 0.1 to 5 microns.

Extensive laboratory studies on dogs, monkeys, rabbits, and rats showed that the emulsion was compatible with the elements of the blood. Induction was best achieved with thiopental sodium, followed immediately by the emulsion. The anesthetic was removed from the circulation by the lungs in the expired air.⁵ The volume of emulsion required for surgical anesthesia in 45 dogs was on the average of 6.2 ml/kg/hour. Dogs tolerated rates of two and three times

Department of Pharmacology, School of Medicine, University of Maryland, Baltimore.

* Pluronic F 68 is an oxyethylene oxypropylene polymer used in the emulsification of fat for intravenous fat feeding.⁶

this amount when respiration was supported. The respiratory pattern in animals anesthetized with the emulsion was similar to that which prevailed when the inhalation procedure was used. Recovery time (when the animal was able to walk unassisted) was generally one half the period of anesthesia.

Laboratory studies revealed that the lecithin was rapidly cleared from the blood. Blood pressure remained slightly below (15 to 20 mm. mean systolic fall) control levels during anesthesia. This was due to the anesthetic agent in the tissues and not the emulsion. There were no significant electrocardiographic changes. Bromosulfalein tests in dogs revealed no diminution of dye excretion after anesthesia. Histologic studies on the lungs, liver, and kidneys revealed no pathologic findings attributable to the anesthetic or other constituents of the emulsion.

Having completed these studies, one of us (H. F. C.) subjected himself to anesthesia by this procedure. The anesthesia was similar to that observed in animals. The subject was lightly anesthetized for a period of about 10 minutes.

Since the first experimental anesthesia in man, clinical studies now embrace 60 anesthetics for a variety of surgical procedures. The results have been uniformly good. Other agents, principally the brominated analogue of methoxyflurane that boils at 88° C., have been studied on animals in an emulsion for the purpose of inducing anesthesia, similar to thiopental sodium. Extrapolation of these experiments to man are now in progress.

It has been established that anesthesia in the dog, monkey, and rabbit can be achieved satisfactorily with an emulsion of methoxyflurane by intravenous infusion. Failure to achieve success with

other volatile anesthetic agents administered intravenously in solution or emulsified appears to stem from two salient properties of the anesthetic agent. These are high vapor pressure and weak anesthetic potency. If these two properties, or either one of them, are characteristic of the agent, the chance of success in this procedure is, in our opinion, slight. If the agent enjoys a high vapor pressure at body temperature, it is clear that it will be rapidly excreted by the lungs in the exhaled air. This necessitates large volumes of a high concentration of the anesthetic emulsion to be infused rapidly to maintain anesthesia. If the agent is an anesthetic of low potency, likewise a relatively high concentration and a large volume of emulsion will be required for anesthesia. These factors contribute to hemolysis, pulmonary edema, and loading of the circulation with fixed oil.

Another facet of anesthesia by this procedure is apparent. Once a sufficient quantity of anesthetic emulsion has been injected to establish the desired plane of surgical anesthesia, it can be maintained by the rebreathing technic as well as by continuous infusion.

Anesthesia, as has been shown, may be induced in the dog by the use of methoxyflurane emulsion. However, it is slow compared to thiopental sodium induction. It is clear that other agents producing rapid induction, for example, halothane, may be added, replacing a portion of the methoxyflurane to achieve more rapid induction.

Summary

It has been shown that the volatile anesthetic methoxyflurane can be administered in an emulsion by intravenous infusion. By this procedure satisfactory

anesthesia was achieved in monkeys, dogs, cats, rabbits, and in man. It is possible that the administration of volatile anesthetic agents in the form of emulsions will make available for anesthetic trial a number of agents which, owing to their high boiling points, cannot be conveniently employed by inhalation technics.

For the administration of highly potent anesthetic agents, a more accurate control of the volume administered may be achieved by intravenous injection than by inhalation.

Flammability hazard is eliminated by this mode of administration and the necessity for an anesthetic "machine" is obviated.

For operations about the nose and mouth this procedure enables the anesthesiologist to administer the agent without the use of the anesthetic mask.

It is apparent that for surgical pro-

cedures in cases of mass emergencies, this procedure affords the advantage of simplicity with a minimum of equipment.

References

1. BURKHARDT, L.: Uber Intravenose Chloroformmarkose, *Munchen. Med. W'schr.*, **2**:1678, 1909.
2. KRANTZ, J. C., JR., TRUITT, E. B., JR., SPEERS, L., and LING, A. S. C.: New Pharmacologic Agent, *Science*, **126**:353, 1957.
3. ARTUSIO, T. F., JR., VAN POZNAK, A., HUNT, R., TIERS, F., and ALEXANDER, M.: Clinical Evaluation of Methoxyflurane in Man (abstract), *Fed. Proc.*, **19**:273, 1960.
4. GEYER, R. P., WATKINS, D. M., MATTHEWS, L. W., and STARE, F. J.: Vasodepressor Activity of Soybean Phosphatide Preparations, *J. Lab. Clin. Med.*, **34**:688, 1949.
5. CHENOWETH, M. B., ROBERTSON, D. N., and ERLEY, D. J.: Blood and Urine Distribution of Methoxyflurane, Ether, Chloroform in Dog, *The Pharmacologist*, Vol. 2, No. 2, 1960.
6. WADELL, W. R., GEYER, R. P., OLSEN, F. R., and STARE, F. J.: Clinical Observations on Use of Norphosphatide (Pluronic) Fat Emulsions, *Metabolism*, Vol. 6, No. 6, 1957.

Mobile Auditory Research Unit

STEVEN J. BORSANYI, M.D., CYRUS L. BLANCHARD, M.D., and AVRUM TAMRES

THE STUDY of electrophysiological auditory responses in clinical settings requires different equipment in some regards to those commonly used in animal research. The criteria for such equipment are: Mobile, compact, versatile and sturdy. It is necessary to have a mobile unit in order to conduct research in various parts of the hospital, like the patient area, operation room, or research laboratories, since duplication of the equipment would be costly. Compactness is important because of the weight and space limitations of a mobile unit. Because of the variety of electrophysiological auditory responses which can be studied in man and correlated (cochlear potentials and VIII-th nerve response from the round window, VIII-th nerve responses from the exposed nerve in the internal auditory meatus, evoked cortical responses from the exposed auditory cortex and evoked cortical responses from scalp electrodes), a versatile unit is required. It goes without saying that sturdiness is essential to the operation of a mobile unit.

The purpose of this article is to present such a mobile auditory research unit. It must be pointed out beforehand that this is a basic unit, constructed primarily for the study of evoked cortical responses to the auditory stimuli. However, it can perform other tasks also mentioned previously. It is obvious if someone wants to do some more sophis-

ticated studies in hearing research, additional equipment might be necessary.

This unit contains basically two systems. The first is the sound generative part, which can produce clicks and pure tones. The parameters of these auditory stimuli can be varied and presented to the subject under investigation through earphones or loudspeaker in free field, preferably in a sound treated room or in other environments, where sound treatment is not so easily accomplished, as in the operation room.

The second is a standard system for electrophysiological data recording consisting of preamplifier, amplifier, and a dual beam and oscilloscope system, with the exception that we incorporated a computer. One channel on the dual beam oscilloscope is used for monitoring the EEG output before it goes into the computer, while the second channel is used for displaying the computed average evoked cortical responses since the monitoring scope on the computer is lacking a scale. Cochlear potentials and VIII-th nerve potentials can be recorded without the computer, however, the addition of the computer to the system extended the versatility of this unit. Thus evoked cortical potentials, cochlear potentials at very low stimulus intensities, and neural potentials of the VIII-th nerve when cancellation of the cochlear microphonics is desirable can be studied to auditory stimuli.

The computer is a small digital "on line" computer designed for the study of

From the Division of Otolaryngology, School of Medicine, University of Maryland, Baltimore.

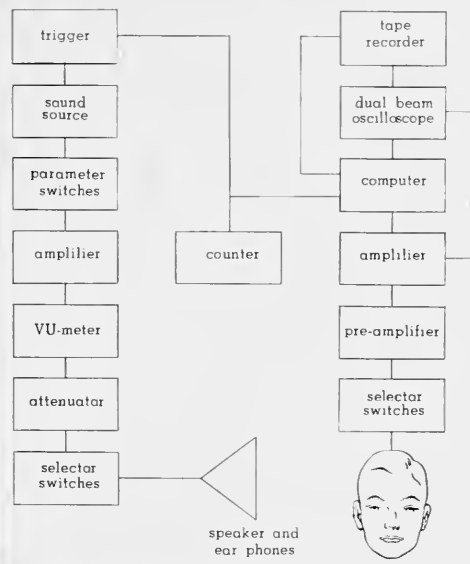
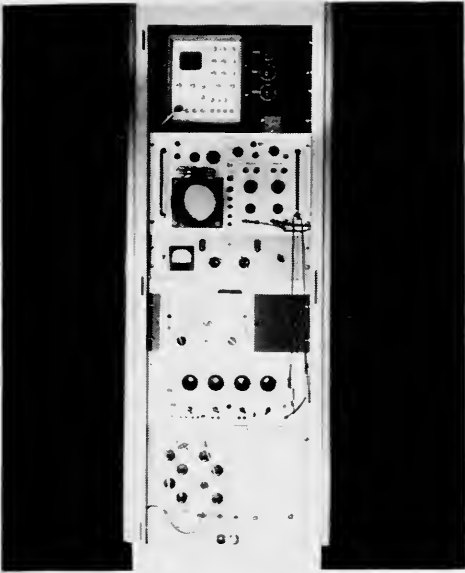


Fig. 1. The picture shows the front panel of the unit.

Block diagram of the equipment.

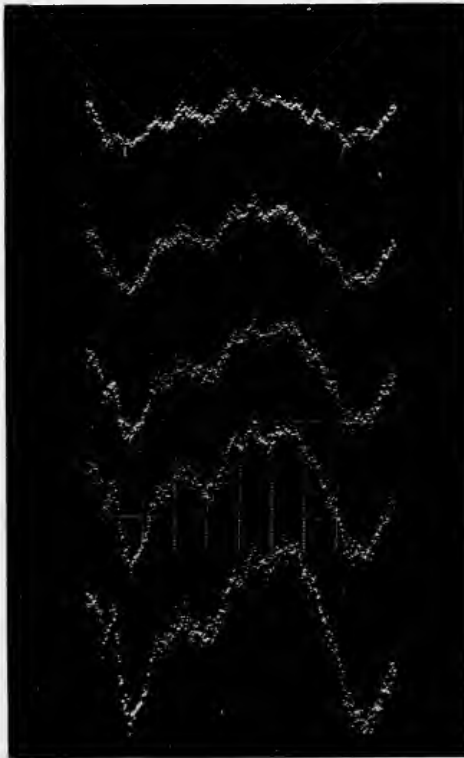


Fig. 2. Evoked cortical responses to auditory stimuli recorded from scalp electrodes from man.

biological variables, in our case evoked cortical responses to auditory stimuli. Because these evoked cortical responses are buried in the much greater spontaneous electrical activity of the cortex, the computer is used for extracting them. This extraction of evoked cortical potentials is done by repeated sampling of the EEG output at fixed intervals following sound stimulation. The constant latency of the evoked cortical potentials makes the averaging possible for the computer.

This method seems to be promising in the field of objective audiometry. The hearing of infants, pre-school children, children with communication disorders, patients with psychogenic deafness, and malingerers are the group we are currently studying with this method. The data obtained are photographed from the oscilloscope's face or stored on tape for future analysis.

Figure 1 shows the front panel of the unit. The tape recorder is in a separate unit and it is not shown here.

A block diagram of the equipment is shown. The next illustration (Figure 2) shows how the pattern of evoked cortical responses arises as it is recorded by scalp electrodes from man. Clicks were presented at 30 db above subjective click threshold level through earphones, binaurally at a rate of 2 clicks/sec. Each wave pattern represents the result of 200 additional successive clicks. Analysis time is 62.5 msec.

Summary: A mobile auditory research unit is described which incorporates a computer for averaging biological variables, in our case evoked cortical responses to auditory stimuli, and references are made to some of the research projects going on in the Division of Otolaryngology using this research unit.



Dean's LETTER

MEDICAL SCHOOL SECTION

*Dear Members of the Alumni and Friends of the
Medical School:*

The quality of a medical school is largely determined by its faculty, its students, its opportunities for study and research in its physical plant, and its clinical and pathological resources. Each of these factors attract and support the others. If any one of the factors is inadequate it likewise detracts and injures the total effort.

The medical school is making substantial progress in the development of its faculty and the attraction of able students. The physical plant of the medical school and hospital are improving, and if we have the assistance of all

our alumni and friends these resources should become outstanding within ten years. The clinical and pathological resources have been outstanding in the past. Soon the state and local communities will provide total costs of indigent patient care on both an outpatient and inpatient basis. This care can be given in any community hospital. While this is a wonderful accomplishment in providing for the indigent sick, it has some features that will make it difficult for adequate teaching of the medical student unless community clinics and hospitals conscientiously refer an adequate variety of diseases and their complications to the medical school clinics and inpatient programs. It is true that some of the required teaching can be done by building up the affiliated programs of the medical school. However, considering the accumulation of knowledge and the subject matter to be covered, an affiliated program can only succeed if the basic program in a medical school is an excellent one that can be scheduled to economically use the students' time.

It is hoped that alumni will bear in mind the needs of the students for variety of clinical and pathological material and will refer these resources to the medical school on a continuing basis.

Sincerely,

WILLIAM S. STONE, M.D.
Dean

Medical and Chirurgical Faculty 165th Annual Meeting

THE ANNUAL MEETING of the Medical and Chirurgical Faculty will be held on May 1, 2, 3, 1963, at the Alcazar, Baltimore, Md.

Featured on the program will be Dr. Edwin H. Lawson of New Orleans who will deliver the Stokes Lecture on "Trends in the Control of Medical Practice." Dr. Eugene P. Cronkite of New York will deliver the Trimble Lecture. Dr. Harold D. Harvey of New York will present the Finney Lecture. His topic will be "A Follow-up Study of Surgically Treated Peptic Ulcer Over Forty-six Years."

On Wednesday evening a panel discussion on "Steps to the Moon" will feature a number of distinguished investigators in Space Flight Medicine. On Thursday morning, May 2, a cerebrovascular panel, including a number of experts, will discuss the all important subject of cerebrovascular disease. This will be followed by a Round Table Luncheon, including some 25 discussion groups.

A number of scientific exhibits and many technical exhibits of interest will be displayed. Dr. J. Morris Reese is Chairman of the Committee on Arrangements.

Engineers Honored by Heart Association for Adjunct Medical Work

ELEVEN ENGINEERS who assisted in developing heart-lung apparatus at the University Hospital were honored recently by citations presented to them by the Maryland Heart Association.

These engineers who had worked with Dr. William G. Esmond, Assistant Professor of Surgery, in the development of

heart-lung apparatus, included: Bernard Baker, instrument machinist of the Department of Mechanical Engineering of the Johns Hopkins University; John Franzone, William Reese, and Roy Herbst of the Fawn Plastics Co., Timonium; Theodore Carski and Raymond Bullinger of the Baltimore Biological Laboratories; Robert Kaestner and Edward Hurdell of E. A. Kaestner Co., Baltimore; Joseph Chyba, Sr., and Joseph Chyba, Jr., of the Surgical Instrument Manufacturing Co., Baltimore; and Jerome Touthey of Dixie Manufacturing Co., Baltimore.

In recognizing the achievements of these men, which included the design, fabrication, production, sterilization, and packaging of heart-lung apparatus and components to the construction of high pressure chambers, Dr. Esmond stated that their collective work represented a major contribution to cardiovascular research and therapy.

Miss Belbin Retires



MISS ADELAIDE BELBIN, who for nearly 38 years has served as Admitting Officer for the University Hospital, retired on October 12, 1962. After a brief vacation, Miss Belbin plans to move to Florida.

University of Maryland Medical School Symbol

THE UNIVERSITY OF MARYLAND School of Medicine was founded in 1807, making it the fifth medical school to be established in the United States. The Medical School building was constructed in 1812 and has been in continuous use since that time.

Containing "chemical" and "anatomical" halls, it has been the symbol of the Medical School, and to graduates returning to the Baltimore campus, it is their "mecca." Although it was built as a copy of the Pantheon in Rome, my personal impression is that it is a more charming and cheerful building than the original Pantheon. At the time of its construction, it was considered a marvel of architecture and engineering, particularly since structural steel was not used. Tradition tells us that originally the interior was even more attractive than the exterior.

The Baltimore campus is now undergoing a tremendous upheaval and many of its landmarks are disappearing. More than ever, we should make every attempt to hold on to that which is good. The exterior of the "Medical School" building has undergone a face lifting and a new copper dome has replaced the old.

Much needs to be done to the interior. Once inside the building, it is anything but a show place. The staircases "creak," the floors are rickety, and in no area does it present its original "colonial" touch of beauty and charm.

With the rejuvenation of downtown Baltimore, many visitors will anticipate seeing some of "old Baltimore." Being contiguous to the Civic and Charles Street Centers, and contemplated hotel and restaurant developments, wouldn't it be advantageous to show our historical background and this wonderful building?

The Alumni should encourage interested civic and historical groups to procure funds for the authentic restoration of this architectural gem.

More on Computers

A NEW APPLICATION of mathematics to medicine is being developed at College Park, a method which will allow physicians and public health authorities to evaluate the efficiency of medical diagnosis.

Mathematical techniques, when applied to medical statistics, can test formally the degree of fallibility of periodic medical check ups, testing also the protection an individual would have in terms of disease detection, if he followed the periodic programs, or the protection an individual would have if he made regular visits for examination.

Dr. George H. Weiss and Dr. Thomas L. Lincoln, a visiting assistant research professor in the university's Institute for Fluid Dynamics and Applied Mathematics, have initially related these new techniques to cancer of the cervix, working on National Health statistics compiled on 50,000 medical examinations from a number of counties selected at random throughout the country.

Using intricate mathematical procedures developed for the study by Dr. Weiss, the case for regular medical examinations for cancer of the cervix can be proven mathematically.

Dr. Lincoln, who is on leave from Yale University, is a pathologist in the School of Medicine. Dr. Lincoln stated that cancer of the cervix was chosen for the study because of the availability of good information and statistics. He stated, "It is possible to calculate on the basis of available statistics whether medical examinations should be more frequent, more regular, or a combination."

Interesting Abstracts

THE FOLLOWING PAPER, entitled "Lipids in Diabetic Retinopathy," was presented by Dr. Richard D. Richards, Professor and Head of the Department of Ophthalmology of the School of Medicine, before the spring scientific assembly of the Maryland and D. C. Chapters of the American Academy of General Practice on May 5 and 6, 1962. The article entitled "Lipids in Diabetic Retinopathy" appeared in the *Journal of the American Geriatrics Society* (Vol. 10, No. 10—October 1962).

In a clinical review of the changes in diabetic retinopathy, the duration and degree of the control of the diabetes are discussed in relation to the incidence and severity of the retinopathy. Apparently lipid metabolism is a prime factor. Various applicable forms of therapy are discussed.

Although there are many gaps in information concerning lipid abnormalities in diabetes mellitus, there is sufficient information to indicate the probability of the correlation between these abnormalities and diabetic retinopathy.

In the juvenile diabetic, the degree and control of the disease are important factors in the instance and severity of retinopathy; when retinopathy does develop, the lipid deposits in the retina are unusual. In this age group insulin therapy controls the lipid abnormality, for control with insulin results in elevated serum levels of both lipids and glucose. When juvenile diabetics reach an age when lipid abnormalities become more marked, retinopathy is apt to appear except in thin patients with good control of serum lipid and glucose level.

By contrast, in the adult diabetic, there is no correlation between the duration and degree of control of diabetes and the incidence and severity of retinopathy. In this group, con-

centration of serum lipids tends to be significantly higher and is not brought up to a normal level by control of the blood glucose level. Additional control of lipid levels seems to be necessary in this age group. Some investigators have reported regression of retinopathy when lipid control is added to glucose control. Several methods of treatment have been used including low fat diets, substitution of unsaturated for saturated fat, nicotinic acid, and heparin.

The determination and control of serum lipid concentration, and perhaps even lipid tolerance tests, will become increasingly important in the treatment of diabetes mellitus and its ocular complications.

An interesting paper entitled "Perimuscular Fibrosis of Renal Arteries with Hypertension" has been prepared by Drs. Colin Wood, Department of Pathology, and Francis J. Borges, Department of Medicine. This paper will shortly appear in the *A.M.A. Archives of Internal Medicine*.

Three young women with hypertension were treated by nephrectomy with relief of hypertension in one. The main renal artery and primary branches, especially the main anterior branch in the excised kidney, showed a thick band of hyaline fibrous tissue immediately external to the muscle coat, which was generally thinner than normal. One patient died a year after operation and was found to have the same lesion in the main artery and two small aberrant arteries in the opposite kidney. No perimuscular fibrosis was found in any other artery at autopsy. The cause of perimuscular fibrosis in other arteries is unknown. It seems likely that the fibrous collar may gradually increase in thickness until renal artery insufficiency and hypertension develop. Extension of the lesion from the main renal artery into the main anterior branch presents a special problem in by-pass grafting.

Publications of Staff of The School of Medicine 1961-1962

DEPARTMENT OF ANATOMY

- CRISPENS, C. G., JR.: Effect of Urethane on Serum Lactic Dehydrogenase Activity in Mice with Transplantable Leukemia. *Anat. Rec.*, 142:224, 1962.
- CRISPENS, C. G., JR., BUSS, I. O., and YOCUM, C. F.: Additional Data on Food of California Quail in Eastern Washington. *Condor*, 64:166, 1962.
- FIGGE, F. H. J. and BARRICK, D. M.: Studies on the Morphological Effects of Heme and Other Metalloporphyrins on the Kidney and Other Organs. *Anat. Rec.*, 139:228, 1961.
- FIGGE, F. H. J.: Obituary—Eduard Uhlenhuth, 1885-1961. *Bull. School Med. Univ. Maryland*.
- FIGGE, F. H. J.: The Interaction of Factors Causing Lymphocytic Leukemia and Mammary Cancer in C3H/Fg Mice. *Anat. Rec.*, 142:232, 1962.
- FUCHS, P. C.: Attempts to Alter Incidence of Leukemia and Mammary Cancer in C3H/Fg Mice. *Anat. Rec.*, 142:233, 1962.
- KRAHL, V. E.: Observations upon the Pulmonary Alveolus and its Capillary Circulation in the Living Rabbit. *Anat. Rec.*, 142:350, 1962.
- KRAHL, V. E.: Four Dimensional Microscopy Applied to the Study of the Lung. *Tutor News*, 39:64, 1961.
- KUYPERS, H. G. J. M., HOFFMAN, A. L., and BEASLEY, R. M.: Distribution of Cortical "Feedback" Fibers in the Nuclei Cuneatus and Gracilis. *Proc. Soc. Exper. Biol. & Med.*, 108:634, 1961.
- KUYPERS, H. G. J. M., FLEMING, W. R., and FARINHOLT, J. W.: Subcortical Projections in the Rhesus Monkey. *J. Comp. Neurol.*, 118:107, 1962.
- KUYPERS, H. G. J. M.: Postnasal Development of the Corticospinal Connections in the Rhesus Monkey. *Anat. Rec.*, 142:250, 1962.
- LEVEQUE, T. F.: Symposium on Neuroendocrinology, Miami, Dec. 1961. In press.
- LEVEQUE, T. F.: Congress on Steroid Hormones, Milan, Italy, May 1962. In press.
- LEVEQUE, T. F. and HOFKIN, G. A.: A Hypothalamic Periventricular PAS Substance and

Neuroendocrine Mechanisms. *Anat. Rec.*, 142:252, 1962.

- MOSES, A. M., LEVEQUE, T. F., GIAMBATTISTA, M., and LLOYD, C. W.: Dissociation between Vasopressor Activity and Neurosecretory Material in the Rat Neurohypophysis. *Endocrinology*. In press.

DEPARTMENT OF ANESTHESIOLOGY

- GOLD, M. I. and HELRICHI, M.: Anesthetic Complications in the Asthmatic Patient. *Anes. & Anal.* In press.
- GOLD, M. I. and HELRICHI, M.: Anesthesia in the Asthmatic Patient. *Anesthesiology*, 23:149 (Jan.-Feb.), 1962.
- HACKETT, P. R., BENSON, D. W., and JUDE, J.: A Symposium on Resuscitation, *Maryland M. J.*, 10:398 (Nov.), 1961.

DEPARTMENT OF BIOPHYSICS

- MULLINS, L. J., ABELMAN, W. J., JR., and SJODIN, R. A.: Sodium and Potassium Ion Effluxes from Squid Axons Under Voltage Clamp Conditions. *Biophys. J.*, 2:257, 1962.
- MULLINS, L. J.: The Macromolecular Structure of Excitable Membranes. *Ann. New York Acad. Sci.*, 94:390, 1961.
- MULLINS, L. J. and FRUMENTO, A. S.: The Concentration Dependence of Sodium Efflux from Muscle. *J. Gen. Physiol.* In press.
- SJODIN, R. A.: Some Cation Interaction in Muscle. *J. Gen. Physiol.*, 44:5, 1961.
- SJODIN, R. A.: Potential Versus Time Asymmetries in Adsorption Membranes. *Science*, 134:110, 1961.

Division of Clinical Pathology

- JIJI, R. M., GANGEROSA, E. J., and MACARRA, F. DE LA: Chloramphenicol and its Sulfamoyl Analogue: Report of Reversible Erythropoietic Toxicity in Healthy Volunteers. *Arch. Int. Med.* In press.

DEPARTMENT OF MEDICINE

- CAROZZA, F. A., JR. and HILLS, D. J.: Role of Hypotension in Altering Blood Coagulability after Endotoxin. *Am. J. Physiol.*, 202:519, 1962.

- CAVANAUGH, D. C., RANDALL, R., KELLEY, E. D., and RUST, J. H., JR.: Effects of Radiation Injury in Plague Infection. *Bact. Proc. M.*, 69:108, 1960.
- CHURCH, G., SCHAMROTH, L., SCHWARTZ, N. L., and MARRIOTT, H. J. L.: Deliberate Digitalis Intoxication: A Comparison of the Toxic Effects of Four Glycoside Preparations. *Ann. Int. Med.* In press.
- COCO, A. E. and MARRIOTT, H. J. L.: Ventricular Aneurysm, Problems in Management. *Maryland M. J.*, 11:174, 1962.
- GREISMAN, S. E., WOODWARD, T. E., HORNICK, R. B. and SNYDER, M. J.: Role of Endotoxin in Typhoid Fever. *Bull. New York Acad. Med.*, 37:493, 1961.
- GREISMAN, S. E., HORNICK, R. B., and SNYDER, M. J.: Studies on Pathogenesis of Typhoid Fever: Endotoxin and Vascular Reactivity. Abstract. Amer. Soc. Clin. Invest. Atlantic City, May 1, 1961.
- GREISMAN, S. E. and WISSEMAN, C. L., JR.: Significance of Vascular Injurious Factors in Human Plasma as Determined by Animal Assay. I. Influence on Nutritional Status. *J. Lab. & Clin. Med.*, 56:355, 1960.
- GREISMAN, S. E.: Significance of Vascular Injurious Factors in Human Plasma as Determined by Animal Assay. II. Role of Human Complement in Increasing Capillary Permeability. *J. Lab. & Clin. Med.*, 57:377, 1961.
- GREISMAN, S. E.: Recovery after Anaphylaxis of Isolated Guinea Pig Ileum Segments. *Am. J. Physiol.*, 200:1033, 1961.
- GREISMAN, S. E., WOODWARD, T. E., HORNICK, R. B., and SNYDER, M. J.: Role of Endotoxin in Typhoid Fever. *Bull. New York Acad. Med.*, 37:493, 1961.
- GREISMAN, S. E. and CAROZZA, F. A., JR.: A Re-evaluation of the Mechanism of Endotoxin Tolerance. *J. Clin. Invest.*, 41:1362, 1962.
- GREISMAN, S. E., WOODWARD, T. E., HORNICK, R. B., SNYDER, M. J., and CAROZZA, F. A., JR.: Typhoid Fever: A Study of Pathogenesis and Physiologic Abnormalities. *Trans. Am. Clin. & Climatol. Assoc.* In press.
- GREISMAN, S. E., HORNICK, R. B., CAROZZA, F. A., JR., and WOODWARD, T. E.: Effect of Endotoxin Tolerance on Human Typhoid Fever. *Trans. Assoc. Am. Phys.* In press.
- MARRIOTT, H. J. L. and WEYN, A. S.: Management of the Child-bearing Cardiac. *Maryland M. J.*, 1961.
- MARRIOTT, H. J. L.: Editorial—Balm for Writer's Itch. *Am. J. Cardiol.*, 7:161, 1961.
- MARRIOTT, H. J. L., SCHWARTZ, N. L., and BIX, H. H.: Ventricular Fusion Beats. *Circulation.* In press.
- MARRIOTT, H. J. L. and WEYN, A. S.: The TV₁-taller-than-TV₆ Syndrome: Its Potential Value in the Early Recognition of Myocardial Disease. *Am. J. Cardiol.* In press.
- MARRIOTT, H. J. L.: A Rational Approach to Quinidine Therapy. Modern Concepts Cardiovascular Disease. In press.
- MARRIOTT, H. J. L.: *Practical Electrocardiography*. 3rd Ed. The Williams & Wilkins Co., 1962. In press.
- MYERBURG, R. J., GOODMAN, J. S., and MARRIOTT, H. J. L.: Atypical Forms of the Wenckebach Phenomenon. *Am. J. Cardiol.* In press.
- PETERSDORF, R. G. and WOODWARD, T. E.: The Use of Antibiotics to Prevent Infections by Specific Pathogens. *J. Pediat.*, 58:153, 1961.
- RANDALL, R., GIBBS, C. J., JR., AULISIO, C. G., BINN, L. N. and HARRISON, V. R.: The Development of a Formalin-killed Rift Valley Fever Virus Vaccine for Use in Man. *J. Immunol.* In press.
- RUSE, J. H., JR., GOLEY, A. F., RANDALL, R., ASL, S. J., and CAVANAUGH, D. C.: Murine Toxin in Plague Infection. *Bact. Proc. M.*, 99:199, 1960.
- SCHAMROTH, L. and MARRIOTT, H. J. L.: Intermittent Ventricular Parasystole with Observations on its Relationship to Extrasystolic Bigeminy. *Am. J. Cardiol.*, 7:799, 1961.
- SCHWARTZ, N. L. and MARRIOTT, H. J. L.: Unusual Dysrhythmia in a Normal Child: Ventricular Parasystole of High Septal or Junctional Origin. *Am. J. Cardiol.* In press.
- WOODWARD, T. E., McCURMB, F. R., JR., CAREY, T. N., and TOGO, Y.: Viral and Rickettsial Causes of Cardiac Disease, including the Coxsackie Virus Etiology of Pericarditis and Myocarditis. *Ann. Int. Med.*, 53:1130, 1960.
- WOODWARD, T. E. and TIGERTT, W. D.: Review of the Activities of the Commission on

- Epidemiological Survey. *Military Med.*, 126:37, 1961.
- WOODWARD, T. E.: Memorial Article on Maurice C. Pincoffs, M.D. *Maryland M. J.*, 10:308, 1961.
- WOODWARD, T. E. and FIRMINER, H. I.: Discussion of Clinical Pathological Conference. *Maryland M. J.*, 10:311, 1961.
- WOODWARD, T. E.: Tick-borne Typhus. Answer to Editor. *J.A.M.A.*, 177:172, 1961.
- WOODWARD, T. E.: Clinical Manifestations and Management of Cholera. SEATO Conference on Cholera. *Public Health Rep.*, 76:323, 1961.
- WOODWARD, T. E.: Chemosuppression and Early Treatment of Certain Specific Infections with Antibiotics. *J. Chron. Dis.* In press.
- WOODWARD, T. E.: Memorial Article on Maurice C. Pincoffs. *Trans. Assoc. Am. Phys.*, 74:33, 1961.
- WOODWARD, T. E.: Memorial Article on Maurice C. Pincoffs. *Maryland M. J.*, June, 1961.
- WOODWARD, T. E. and SMADEL, J. E.: Chapter on Rickettsial Diseases. Harrison's *Principles of Internal Medicine*. 4th Ed. McGraw Hill, 1962.
- WOODWARD, T. E. and HORNICK, R. B.: Chapter on Typhoid Fever. Harrison's *Principles of Internal Medicine*. 4th Ed. McGraw Hill, 1962.
- WOODWARD, T. E.: Chapter on Tularemia. Cecil-Loeb *Textbook of Medicine*. 11th ed. W. B. Saunders Co., 1962.

Division of Cardiology

- DEMBO, D. H.: Indications for Right Heart Catheterizations. *Maryland M. J.*, 11:377, 1961.
- LEE, YU-CHEN and SCHERLIS, L.: Atrial Septal Defect: Electrocardiographic, Vectorcardiographic, and Catheterization Data. *Circulation*, 25:1024, 1962.
- PAPADOPOULOS, C., and BLAZEK, C.: Ventricular Tachycardia of 70 Days Duration with Survival. *Am. J. Cardiol.* In press.
- SCHERLIS, L. and LEE, YU-CHEN: Right Bundle Branch Block Following Open Heart Surgery: Electrocardiographic and Vectorcardiographic Study. *Am. J. Cardiol.*, 8:780, 1961.

Division of Endocrinology and Metabolism

- CONNOR, T. B.: Diabetes Insipidus. *Current Therapy*, 1962.
- HOWARD, J. K. and CONNOR, T. B.: Hypertension Produced by Unilateral Renal Disease. *Arch. Int. Med.*, 109:62, 1962.
- SHAW, C. E., HURWITZ, G. F., SCHMUCKER, M., BRAGER, S. H., and BESSMAN, S. P.: A Clinical and Laboratory Study of Insulin Dosage in Diabetic Acidosis: Comparison with Small and Large Doses. *Diabetes*, 2:23, 1962.
- WISWELL, J. G.: The Diagnosis and Treatment of Primary and Secondary Hypothyroidism. *J. Chron. Dis.*, 14:544, 1961.
- WISWELL, J. G. and CORONHO, V.: The Disappearance of I-131 Triiodothyronine in the Presence of Fever. *J. Clin. Endocrinol. & Metab.*, 22:657, 1962.

General Medical Clinic

- ESMOND, W. G., COWLEY, R. A., ATTAR, S., DEMETRIADES, A. D., HACKETT, P., HOLLINGSWORTH, N., FRANZONE, J., BAKER, B., KAESTNER, R., HURDLE, E., CARSKI, T., and BULLINGER, R.: A Versatile Pump—Oxygenator System with Disposable Components. *Proc. Bio-Med. Eng. Symposium*, San Diego, 1961.
- ESMOND, W. G., BAKER, B., and ATTAR, S.: An Improved Spring Loaded Single Roller 360° Blood Pump. *Trans. Am. Soc. Artificial Int. Organs*, Vol. 7, 1961.
- ESMOND, W. G., ATTAR, S., STRAM, J., DEMETRIADES, A. D., JURF, A., GOLD, M. I., and COWLEY, R. A.: Profound Hypothermia with Simplified Equipment: A Disposable Stainless Steel Heat Exchanger of High Efficiency. *J. Thor. & Cardiovasc. Surg.*, 42:563, 1961.
- ESMOND, W. G., BLAIR, E., COWLEY, R. A., ATTAR, S.: Metabolic Effects of Cessation of Circulation at Various Levels of Hypothermia. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- ESMOND, W. G., COWLEY, R. A., ATTAR, S., BLAIR, E.: High Flow Cooling for Profound Hypothermia. The Prevention of Metabolic Acidosis in Clinical Cardiac Surgery. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- SCHOCKET, B. R.: Some Aspects of Health Maintenance in the Later Years. *Sinai Hosp. Bull.*, Winter 1962.

- SCHOCKET, B. R.: A Comprehensive View of Obesity. *Psychosomatics*, June 1962.
- SNYDER, J. N.: Family Outbreak of Cat Scratch Disease. *J.A.M.A.*, 180, June 2, 1962.

Division of Hypertensive & Renal Diseases

- MADELOFF, M. S., SCHWARTZ, F. D., BORGES, F. J., ENTWISLE, G., REVELL, S. T. R., JR.: Differential Renal Clearance Patterns in the Evaluation of Hypertension. *J. Urol.*, p. 258, 1962.
- SCHWARTZ, F. D. and MADELOFF, M. S.: The Use of Radiohippuran in the Diagnosis of Unilateral Renal Disease. *J. Urol.*, p. 249, 1962.

Division of Infectious Diseases

- BARNETT, H. C., KEEGAN, H. L., MCCRUMB, F. R., and GOULD, D. J.: The Bionomics of the Common Malayan Culicine Mosquitoes in Relations to Japanese Encephalitis. *Trans. Roy. Soc. Trop. Med. Hyg.* In press.
- HORNICK, R. B., SCHLUEDERBERG, A. E., and MCCRUMB, F. R., JR.: Vaccination with Live Attenuated Measles Virus. *Am. J. Dis. Child.*, 103:344, 1962.
- HORNICK, R. B.: Treatment of Typhoid Fever and Salmonellosis. *Current Therapy*, 1961 and 1962.
- MCCRUMB, F. R., JR.: Aerosol Infection of man with *Pasteurella tularensis*. *Bact. Rev.*, 25:262, 1961.
- MCCRUMB, F. R., JR., BULKELEY, J. T., HORNICK, R. B., SNYDER, M. J., and TOGO, Y.: Clinical Trials with Living Attenuated Measles-virus Vaccines. *Am. J. Pub. Health*, 52:11, 1962.
- MCCRUMB, F. R., JR., BULKELEY, J. T., HORNICK, R. B., SNYDER, M. J., and TOGO, Y.: Globulin-modified, Live Attenuated Measles-virus Vaccination. *Am. J. Dis. Child.*, 103:350, 1962.
- MCCRUMB, F. R., JR., KRESS, S., and SNYDER, M. J.: Quantitative Aspects of Attenuated Measles-virus Infection. *Am. J. Dis. Child.*, 103:443, 1962.
- MCCRUMB, F. R., JR.: Plague, in the Cecil-Loeb *Textbook of Medicine*, 11th Ed. W. B. Saunders Co., 1962.
- SNYDER, M. J., MCCRUMB, F. R., JR., BIGBEE, T. P.: Observations on the Sero-Epidemiology of Measles. *Am. J. Dis. Child.*, 103:250, 1962.

Division of Neurology

- HECK, A. F.: Manifestations of Spontaneous Subarachnoid Hemorrhage in the Bulbus Oculi. *Neurology*, 11:701, 1961.
- MERLIS, J. K.: Epilepsy, Chap. 9 in *Progress in Neurology & Psychiatry*, Grune & Stratton, 1961.
- MERLIS, J. K.: Dendritic Potentials and the Epileptic Spike, Abstract. *Excerpta Medica*, 37:202, 1961.
- MERLIS, J. K.: Abnormal Excitatory Activity in *Progress in Neurology & Psychiatry*, Vol. V. Paul R. Hoeber, 1962.
- POFFENBERGER, A. L., COTTER, E. F., and ANDERSCH, M.: Trial of Tolbutamide in the Treatment of Multiple Sclerosis. *Maryland M. J.*, October, 1961.
- TEITLEBAUM, H. A., GLEIDMAN, and GANTT: Conditional Reflex Formation Under Pentobarbital. *Psychosomatic Med.*, 23:446, 1961.
- VAN BUSKIRK, C. and FINK, R.: Physiologic Tremor: An Experimental Study. *Neurology*, 12:361, 1962.
- VAN BUSKIRK, C.: Chapter on Extracerebral Vascular Disease in *Clinical Neurology*, Paul B. Hoeber, 1962.

Division for Pulmonary Disease

- MORGAN, W. K. C.: Caplans' Syndrome. *Ann. Int. Med.*, 55:667, 1961.
- MORGAN, W. K. C.: Arc-Welders' Lung Complicated by Conglomeration. *Am. Rev. Resp. Dis.*, 85:570, 1962.
- MORGAN, W. K. C.: The Intravenous Congo Red Test in Rheumatoid Arthritis. *Acta Rheumat. Scand.* In press.

DEPARTMENT OF MICROBIOLOGY

- EYLAR, O. R., JR. and VERNA, J. E.: A Plaque Assay for Rabbit Fibroma Virus. In press.
- GREISMAN, S. E. and WISSEMAN, C. L., JR.: Pathophysiological Alterations Induced by Rickettsial Toxins. *Medical Science Pub. No. 7*, Walter Reed Institute of Research, p. 39, 1960.
- MYERS, W. F. and PARETSKY, D.: Synthesis of Serine by *Coxiella burnetii*. *J. Bact.*, 82:761, 1961.
- PROVOST, P. J. and DOETSCH, R. N.: An Appraisal of *Caryophanon latum* Peshkoff. *J. Gen. Microbiol.* In press.

MEDICAL SCHOOL SECTION

SMITH, A. G., TAUBERT, H. D., and TOWNS, C. M.: Comparative Media Studies in the Isolation of *Candida albicans* from Pregnant Women. *Mycopathologia et Mycologia Applicata*. In press.

SWEET, B. H., WISSEMAN, C. L., JR., KITAOKA, M., and TAMIYA, T.: Immunological Studies with Group B Arthropod-borne Viruses. II. Effect of Prior Infection with Japanese Encephalitis Virus on the Viremia in Human Subjects Following Administration of 17D Yellow Fever Vaccine. *Am. J. Trop. Med. & Hyg.* In press.

WISSEMAN, C. L., JR.: Interaction of Rickettsiae and Phagocytic Host Cells. II. Chemotactic Action of Typhus Rickettsiae on Human Polymorphonuclear Leukocytes *in vitro*. *J. Immunol.*, 87:468, 1961.

WISSEMAN, C. L., JR., PAZOUREK, L., BOCCUTI, A., JAMES, H., and OLDSTONE, M. B. A.: Studies on Rickettsial Toxins. V. Dissimilarity between the Action of Rickettsial Mouse Lethal Toxin and Bacterial Endotoxin in Mice. *J. Immunol.*, 86:613, 1961.

WISSEMAN, C. L., JR. and SWEET, B. H.: The Ecology of Dengue in *Studies in Disease Ecology*. Hafner Publishing Co., 1961.

WISSEMAN, C. L., JR.: Symposium on the Spotted Fever Group of Rickettsiae. *Medical Science Publication No. 7*, Walter Reed Institute of Research, 1960.

WISSEMAN, C. L., JR., WOOD, W. H., JR., NORIEGA, A. R., JORDAN, M. E., and RILL, D. J.: Antibodies and Clinical Relapse of Murine Typhus Fever Following Early Chemotherapy. *Ann. Int. Med.* In press.

WISSEMAN, C. L., JR., SWEET, B. H., KITAOKA, M., and TAMIYA, T.: Immunological Studies with Group B Arthropod-borne Viruses. I. Broadened Neutralizing Antibody Spectrum Induced by Strain 17D Yellow Fever Vaccine in Human Subjects Previously Infected with Japanese Encephalitis Virus. *Am. J. Trop. Med. & Hyg.* In press.

WISSEMAN, C. L., JR., and SWEET, B. H.: Immunological Studies with Group B Arthropod-borne Viruses. III. Response of Human Subjects to Revaccination with 17D Strain Yellow Fever Vaccine. *Am. J. Trop. Med. & Hyg.* In press.

WISSEMAN, C. L., JR., GAULD, J. R., and WOOD, J. G.: Interaction of Rickettsiae and Phagocytic Host Cells. III. Opsonizing An-

tibodies in Human Subjects Infected with Virulent or Attenuated *Rickettsia prowazekii* or Inoculated with Killed Epidemic Typhus Vaccine. *J. Immunol.* Submitted for publication.

WEISS, E., MYERS, W. F., SUTOR, E. J., JR., and NEPTUNE, E. M., JR.: Respiration of a Rickettsialike Microorganism, *Wolbachia persica*. *J. Infect. Dis.*, 110:155, 1962.

DEPARTMENT OF OBSTETRICS AND GYNECOLOGY

MCNALLY, H. B. and FITZPATRICK, V. DEP.: Patient with Four or More Cesarean Sections: Second Series. *South. M. J.*, 54:360, 1961.

MUNFORD, R. S. and HASKINS, A. L.: Uterine Choriocarcinoma Treated with Operation and Amethopterin. *Am. J. Obst. & Gynec.*, 82:646, 1961.

RICCIUTTI, V., NOBLE, A. J., and KIEFER, L.: Malignant Mixed Mesodermal Tumor of the Uterus: Report of a Case. *Obst. & Gynec.*, Vol. 18, 1961.

TAUBERT, H. D. and HASKINS, A. L.: The Effect of Isoxsuprine Hydrochloride Upon the Contractility of the Human Uterus in Labor. *Maryland M. J.*, 1961.

DEPARTMENT OF PATHOLOGY

FIRMINGER, H. I. and REUBER, M. D.: Influence of Adrenocortical, Androgenic, and Anabolic Hormones on the Development of Carcinoma and Cirrhosis of the Liver in A X C Rats Fed N-2-Fluorenyldiacetamide. *J. Nat. Cancer Inst.*, 27:559, 1961.

NAIB, Z. M.: Giant Cell Carcinoma of the Lung: Cytological Study of the Exfoliated Cells in Sputa and Bronchial Washings. *Dis. Chest*, 40:69, 1961.

NAIB, Z. M.: Exfoliative Cytology of Renal Pelvic Lesions. *Cancer*, 14:1085, 1961.

NAIB, Z. M.: and MASAKAWA, N.: Identification of Condyloma Acuminata Cells in Routine Vaginal Smears. *Obst. & Gynec.*, 18:735, 1961.

NAIB, Z. M.: Single Trophoblastic Cells as a Source of Error in the Interpretation of Routine Vaginal Smears. *Cancer*, 14:1183, 1961.

NAIB, Z. M. and ATTAR, S.: Exfoliative Cytologic and Clinical Study of a Case of

Endobronchial Hamartoma of the Lung. *Dis. Chest*, 41:468, 1962.

RICCUTTI, V., NOBLE, A. J., and KIEFER, L.: Malignant Mixed Mesodermal Tumor of the Uterus: Report of a Case. *Obst. & Gynec.*, 18:757, 1961.

DEPARTMENT OF PEDIATRICS

ABEL, C. A. and GOOD, T. A.: Identification and Quantitation of N-Acetyl-Neuraminic Acid in Human Saliva. *South. M. J.*, 54:35, 1961.

BESSMAN, S. P., RUDO, F., and COWLEY, R. A.: The Relation of Blood pH to the Movement of Ammonia into the Cerebral and Peripheral Tissues during Hypothermia. *Surgery*, 50:478, 1961.

BESSMAN, S. P.: *Ammonia and Coma*, Chemical Pathology of the Nervous System. Pergamon Press, 1961.

BESSMAN, S. P. and HAMMEL, C. L.: Protein Synthesis in Nuclei of Avian Erythrocytes. *Biochem. & Biophys. Res. Com.*, 7:26, 1962.

BESSMAN, S. P. and BALDWIN, R.: Imidazole Aminoaciduria in Cerebromacular Degeneration. *Science*, 135:789, 1962.

BESSMAN, S. P.: Hereditary Imidazole Aminoaciduria—A New Syndrome. *South. M. J.*, Vol. 54, 1961.

BRADLEY, J. E., YOUNG, J. D., and LENTZ, G.: Polycythemia Secondary to Pheochromocytoma. *J. Urol.*, 86:1, 1961.

BRADLEY, J. R.: Parents Acceptance of the Diagnosis of Mongolism in their Infants. *CMD*, 28:57, 1962.

BRADLEY, J. E.: Breast-Feeding. *CMD*, 29:57, 1962.

BRADLEY, J. E., YOUNG, J. D., and LENTZ, G.: Polycythemia Secondary to Pheochromocytoma. *Blood*, 19:127, 1962.

CARTER, J. F.: Speech Disorders of Children. *J. Maryland Dental Assoc.*, Vol. 5, April 1962.

CLEMMENS, R. L. and REYES, A. G.: Congenital Nongoitrous Hypothyroidism: Its Concurrent Occurrence in Monozygotic Twins. *South. M. J.*, 54:1439, 1961.

CLEMMENS, R. L.: Minimal Brain Damage in Children, An Interdisciplinary Problem. *Children*, 8:179, 1961.

CLEMMENS, R. L.: Minimal Brain Damage in

Children: Reader's Exchange. *Children*, 8:240, 1961.

COFFIN, G. S.: Effects of Pyrimethamine (Daraprim) on Antibacterial Activity of Certain Compounds *in Vitro*. (To be published in *Antibiotic Medicine*.)

GLASER, K.: Implications from Maternal Deprivation Research for Practice Theory in Child Welfare. *Maternal Deprivation*. Child Welfare League of America, Inc., January, 1962.

GLASER, K.: Could You Be a Foster Parent? *P.T.A. Magazine*, Vol. 56, January, 1962.

GOOD, T. A. and BESSMAN, S. P.: The Determination of Galactosamine and Glucosamine by Suppression of the Elson-Morgan Reaction with Borate Buffers. *South. M. J.*, 54:12, 1961.

GORTEN, M. K., WORKMAN, J. B., and HEPNER, R.: A Quantitative Study of Absorption of Labeled Iron in Premature Neonates. *Am. J. Dis. Child.*, 102:202, 1961.

HAMMEL, C. L. and BESSMAN, S. P.: Avian Erythrocyte Nucleus as Site of Globin Synthesis. *Fed. Proc.*, 21:411, 1962.

SHAW, C. E., JR., HURWITZ, G. E., SCHMUKLER, M., BRAGER, S. H., and BESSMAN, S. P.: A Clinical and Laboratory Study of Insulin Dosage in Diabetic Acidosis: Comparison with Small and Large Doses. *Diabetes*, 2:23, 1962.

WALDMAN, T. A. and BRADLEY, J. E.: Polycythemia Secondary to a Pheochromocytoma with Production of an Erythropoiesis Stimulating Factor by the Tumor. *Proc. Soc. Exper. Biol. & Med.*, 108:425, 1961.

WALKER, S. H.: Periodic Fever in Regional Enteritis. *J. Pediat.*, 60:561, 1962.

WALKER, S. H. and TOGO, Y.: Encephalitis due to Coxsackie Virus Group B, Type 5 in a Nine Year Old Boy. *Am. J. Dis. Child.* In press.

ZARBIN, G. and GORTEN, M. K.: Splenectomy in Sickle Cell Anemia. *J. Pediat.* In press.

DEPARTMENT OF PHARMACOLOGY

KRANTZ, J. C., JR. and CARR, C. J.: *Pharmacologic Principles of Medical Practice*. 5th Ed.

MUSSEY, R. D. and BIRD, J.: *Modern Pharmacology and Therapeutics*. 2nd Ed.

MEDICAL SCHOOL SECTION

DEPARTMENT OF PHYSIOLOGY

- BLAKE, W. D.: Sodium Conservation. *Am. J. Physiol.*, 201:149, 1961.
- BLAKE, W. D.: Denervation Diuresis. *Am. J. Physiol.*, 202:77, 1962.
- BLAKE, W. D.: Epinephrine on Glucose Reabsorption. *Am. J. Physiol.*, 202:897, 1962.
- CAROZZA, F. A., JR. and HILLS, J. D.: Role of Hypotension in Altering Blood Coagulability After Endotoxin. *Am. J. Physiol.*, 202:519, 1962.
- FRIESS, S. L., GREENBAUM, L. J., STANDAERT, F. G., and THOMMSEN, W. C.: Central Activity Evoked in the Cat by Cis-trans Isomers of 1,2-Aminocyclohexanol Derivatives. *Toxicol. & App. Pharmacol.*, 3:638, 1961.
- PINTER, G. G.: A Gradient Centrifugation Method for the Determination of Particle Size Distribution of Chylomicrons and of Fat Droplets in Artificial Fat Emulsions. *Biochem. Biophys. Acta*, 59:116, 1962.
- SMITH, D. C., BARRY, J. Q., and GOLD, A. J.: Respiratory Alkalosis and Hypokalemia at Altitude. *Am. J. Physiol.*, June, 1962.
- SMITH, D. C.: Financing a Medical Education Today. *Bull. School Med. Univ. Maryland*, 47:v, 1962.
- TOYOOKA, E. T. and BLAKE, W. D.: Hypoxia on Adrenal. *Am. J. Physiol.*, 201:448, 1961.

DEPARTMENT OF PREVENTIVE MEDICINE

- PHILLIPS, O. C., DAVIS, G. H., FRAZIER, T. M., and NELSON, A. T.: The Role of Anesthesia in Obstetric Mortality. *Cur. Res. Anes. & Anal.*, 40:557, 1961.
- PHILLIPS, O. C. and FRAZIER, T. M.: Obstetric Anesthetic Care in the United States. *Obst. & Gynec.*, Vol. 19, June, 1962.
- TAYBACK, M.: New Horizons for Pennsylvania Health. *Penna. Welfare Forum*, Vol. 27, December 1961.
- TAYBACK, M.: Methods Likely to Result in Reproducible Judgments Concerning Health Programs. *Proc. Mat. & Child. Health Conf.* University of California, Berkeley, Calif., December 1961.

DEPARTMENT OF PSYCHIATRY

- BARTEMEIER, L. H.: The Secret of Medical Practice. *Mental Hygiene*, 45:323, 1961.
- BARTEMEIER, L. H. and ROSEN, H.: Hypnosis in Medical Practice. *J.A.M.A.*, 175:976, 1961.
- BARTEMEIER, L. H.: Psychological Factors in Doctor-Patient Relations. *Med. Ann. Dist. Columbia*, 30:553, 1961.
- BARTEMEIER, L. H.: *Foundations of Psychopathology* by Dr. John C. Nemiah, (Book Review). *Curr. Med. Prac.*, 28:30, 1961.
- BARTEMEIER, L. H.: Obligations of the Medical Profession. *State Gov't*, 25:12, 1962.
- BARTEMEIER, L. H.: The Future of Psychiatry: The Report of the Joint Commission on Mental Illness and Health. *Am. J. Psychiat.*, Vol. 118, May, 1962.
- BLUMFELD, R.: Community Influences on Children. *Childhood Education*, 38:409, 1962.
- BRODY, E. B.: Social Conflict and Schizophrenic Behavior in Young Adult Negro Males. *Psychiatry*, 24:4, 1961.
- BRODY, E. B.: Freud's Theory of Psychosis and the Role of the Psychotherapist. *J. Nerv. & Ment. Dis.*, 133:1, 1961.
- BRODY, E. B.: The Ambulatory Schizophrenic as a Medical Patient. *Psychosomatics*, 2:6, 1961.
- BRODY, E. B.: The Nonhuman Environment in Normal Development and Schizophrenia by H. S. Searles, (Book Review). *Psychoanal. Quar.*, 1962.
- DERBYSHIRE, R. L.: Neglected Areas in Family Living by T. E. Sullenger, (Book Review). *J. Nerv. & Ment. Dis.*, 133:361, 1961.
- DERBYSHIRE, R. L.: Premarital Dating Behavior by W. Ehrmann, (Book Review). *J. Nerv. & Ment. Dis.*, 134:95, 1962.
- EICHLER, M. and BESSMAN, S. P.: A Double Blind Study of the Effect of Ammonium Infusion on Psychological Functioning in Cirrhotic Patients. *J. Nerv. & Ment. Dis.* In press.
- EICHLER, M.: Americans View Their Mental Health: A Nationwide Interview Survey by Gerald Gwin et al. *J. Nerv. & Ment. Dis.*, 133:449, 1961.
- EICHLER, M.: Recent Advances in Biological Psychiatry Including a Havelock Ellis Centenary Symposium on Sexual Behavior, edited by Joseph Wortis. *J. Nerv. & Ment. Dis.* In press.

- GLASER, K.: Could You Be a Foster Parent? *P.T.A. Mag.*, Vol. 56, January, 1962.
- GLASER, K.: Implications from Maternal Deprivation Research for Practice Theory in Child Welfare. *Maternal Deprivation*. Child Welfare League of America, Inc., January, 1962.
- HOLDEN, W. B.: A Short Dictionary of Existentialism (Book Review). *J. Nerv. & Ment. Dis.*
- HOWE, E. S. and POPE, B.: An Empirical Scale of Therapist Verbal Activity Level in the Initial Interview. *J. Consult. Psychol.*, Vol. 25, 1961.
- HOWE, E. S. and POPE, B.: The Dimensionality of Ratings of Therapist Verbal Responses. *J. Consult. Psychol.*, 25:296, 1961.
- HOWE, E. S. and POPE, B.: Therapist Verbal Activity Level and Diagnostic Utility of Patient Verbal Responses. *J. Consult. Psychol.*, 26:149, 1962.
- HOWE, E. S.: Anxiety-arousal and Specificity: Rated Correlates of the Depth of Interpretive Statements. *J. Consult. Psychol.*, 26:178, 1962.
- HOWE, E. S.: Postponement Behavior as a Function of Approach and Avoidance Motivation. *Psychol. Reports*, 10:275, 1962.
- HOWE, E. S.: A Study of the Semantic Structure of Ratings of Interpretive Responses. *J. Consult. Psychol.* In press.
- HUFFER, V. S. and MASER, R. R.: Review of Dynamic Psychiatry in Simple Terms. *J. Nerv. & Ment. Dis.*, 133:273, 1961.
- KLEE, G. D., ARONSON, H., and WATERMANN, C. E.: Effect of Lysergic Acid Diethylamide (LSD-25) on Learning and Retention. *Exper. Psychopathol.*, 13:17, 1962.
- MONROE, R. R., *et al.* The Integration of Psychiatric and Psychoanalytic Training at Tulane: A Ten Year Overview 1950-1960. *J. M. Educ.*, Vol. 36, August, 1961.
- MONROE, R. R., HEATH, R. G., HEAD, R. G., STONE, R. L., and RITTER, K. A.: A Comparison of Hypertensive and Hypotensive Schizophrenics. *Psychosomat. Med.*, Vol. 23, Nov.-Dec., 1961.
- MONROE, R. R. and HEATH, R. G.: Effects of Lysergic Acid and Various Derivatives on Depth and Cortical Electrograms. *J. Neuropsychiat.*, Vol. 3, December, 1961.
- OVERALL, B. C. and ARONSON, H.: Expectations of Psychotherapy in Lower Socio-economic Class Patients. *Digest*, 32:271, 1962.
- POPE, B. and SIEGMAN, A. W.: The Effect of Therapist Verbal Activity Level and Specificity on Patient Productivity and Speech Disturbances in the Initial Interview. *J. Consult. Psychol.* In Press.
- POPE, B.: The Anatomy of Psychotherapy (Book Review). *J. Nerv. & Ment. Dis.*, 1962.
- REID, JOHN R.: Psychotherapy and Vales in *Modern Concepts of Psychoanalysis*, edited by Leon Salzman. 1962.
- REID, J. R.: Truth, Values, and Psychoanalysis in *Science and Psychoanalysis*, edited by Jules H. Masserman. 1962.
- REID, J. R.: The Language of Psychology (Book Review). *J. Nerv. & Ment. Dis.* 1962.
- REIDY, J. J.: Family Participation in Psychiatric Treatment of Children in *Mental Health and Social Welfare*. 1961.
- REIDY, J. J.: Mental Retardation. *Medical Times*, August, 1961.
- REIDY, J. J.: Role of the Hospital and the Community in the Treatment of Emotionally Disturbed Children. *Mental Health in Virginia*, Winter Issue, 1961, p. 1.
- REIDY, J. J. and COLVIN, R. W.: Voice Recognition as a Measure of Self Attitude and Relatedness. *Arch. Neurol. & Psychiat.*, May, 1958.
- ROBINSON, H. A.: Anxiety in Elementary School Children (Book Review). *J. Nerv. & Ment. Dis.*, 133:264, 1961.
- ROBINSON, H. A.: The Real Bohemia (Book Review). *J. Nerv. & Ment. Dis.*, 133:278, 1961.
- ROBINSON, H. A.: Mostly Murder (Book Review). *J. Nerv. & Ment. Dis.*, 133:445, 1961.
- ROBINSON, H. A.: The Ego in Love and Sexuality. *J. Nerv. & Ment. Dis.*, 133:456, 1961.
- ROBINSON, H. A.: Classics in Psychology (Book Review). *J. Nerv. & Ment. Dis.*, 133:559, 1961.
- ROBINSON, H. A.: Growing Old: The Process of Disengagement (Book Review). *J. Nerv. & Ment. Dis.*, 134:377, 1962.
- ROBINSON, H. A.: Conflicting Concepts and Contradictions in the Management of the Aged. *J. Jewish Commun. Service*. In press.

MEDICAL SCHOOL SECTION

- SCHNAPER, N.: Postanesthetic (Postoperative) Emotional Responses. *Anesthesiology*, 22: 674, 1961.
- SHOCHET, B.: Some Aspects of Health Maintenance in the Later Years. *Sinai Hosp. Bull.* In press.
- SHOCHET, B.: A Comprehensive View of Obesity. *Psychosomatics*. In press.
- SHOCHET, B.: Body: Weight: Aspects of Medical Management. *Am. Pract.* In press.
- SIEGMAN, A. W.: Religion and Child Rearing in *Research Plans.*, p. 56, 1962.
- SIEGMAN, A. W.: On Religion and Probity. *Rel. Educ.*, 57:132, 1962.
- SIEGMAN, A. W.: The Relationship between Future Time Perspective, Time Estimation, and Impulse Control in a Group of Young Offenders and in a Control Group. *J. Consult. Psychol.*, 25:470, 1961.
- SIEGMAN, A. W.: Intercorrelation of Some Measures of Time Estimation. *Percept. Motor Skills*, 14:381, 1962.
- SIEGMAN, A. W.: Future Time Perspective and the Perception of Duration. *Percept. Motor Skills*. In press.
- SIEGMAN, A. W.: The Need for Excitation as a Factor in Juvenile Delinquency. *J. Offender Ther.*, Vol. 5, 1962.
- SIEGMAN, A. W.: La Notion de Dieu et l'Image du Pere. *Lumen Vitae*, 16:289, 1961.
- WASKOW, I.: Reinforcement in a Therapy-like Situation through Selective Responding to Feelings or Content. *J. Consult. Psychol.*, 26:11, 1962.
- WASKOW, I. and BERGMAN, P.: Does "Theoretical Orientation" Influence Ratings of Therapist "Warmth-Acceptance"? *J. Consult. Psychol.* In press.
- WEINTRAUB, W. and ARONSON, H.: The Application of Verbal Behavior Analysis to the Study of Psychological Defense Mechanisms. Methodology and Preliminary Report. *J. Nerv. & Ment. Dis.*, 134:169, 1962.
- WEINTRAUB, W., KLEE, G. D., and ARONSON, H.: Effect of Lysergic Acid Diethylamide (LSD-25) on Learning and Retention. *J. Clin. & Exper. Psychol.*
- WEINTRAUB, W.: The Social Epidemiology of Mental Disorder (Book Review). *J. Nerv. & Ment. Dis.*, 133:357, 1961.
- WEINTRAUB, W.: The Clinical Use and Misuse of Tranquilizers. *Maryland M. J.* In press.
- WILL, O.: Psychotherapy in References to the Schizophrenic Reaction in *Contemporary Psychotherapies*, edited by Morris I. Stein. 1961.
- WILL, O.: Comments on the Psychotherapeutic Intervention in *Contemporary Psychotherapies*, edited by Morris I. Stein. 1961.
- WILL, O.: Hallucinations: Comments Reflecting Clinical Observations of the Schizophrenic Reaction in *Hallucinations*, edited by L. J. West. 1962.
- WILL, O.: Processes in Psychoanalytic Education in *Science and Psychoanalysis*, edited by Jules H. Masserman. 1962.
- YOUNG, I. S.: Discussion of Family Treatment in Social Work. *Proc. Inst. on "Family Diagnosis and Treatment."* In press.
- YOUNG, I. S.: Discussion of Principles in Family Diagnosis in Treatment of Family Conflicts. *Proc. Inst. on "Family Diagnosis and Treatment."* In press.

DEPARTMENT OF RADIOLOGY

- DENNIS, J. M.: The Solitary Dense Vertebral Body. *Radiology*, 77:618, 1961.
- BLOEDORN, F. G., YOUNG, J. D., CUCCIA, C. A., MERCADO, R., JR., and WISENBERG, M. J.: Radiotherapy in the Treatment of Carcinoma of the Bladder: Possible Complications and Their Prevention. *Radiology*. In press.
- CUCCIA, C. A. and VILLA SANTA, U.: L'Irradiazione Preoperatoria nella terapia del carcinoma dell'endometrio. *La Radiologia Medica*. In press.
- CUCCIA, C. A.: Curietherapie Interstitielle par grains. *Annales de Radiologie*. In press.
- WOLFEL, D. A.: Posterior Mediastinal Lymph Node Hyperplasia. *Radiology*. In press.
- WOLFEL, D. A.: Leiomyosarcoma of the Esophagus. *Am. J. Roent., Rad. Ther. & Nucl. Med.* In press.

DEPARTMENT OF SURGERY

- BUXTON, R. W.: Progress in Surgery. *Americana Annual*, 1961.
- BUXTON, R. W., NINOMIYA, H., and MICHAELIS, M.: A Note on Adenosine and Adenylylate Deaminases in Brain and Quadriceps Muscle of the Rat in Noble-Collip Drum

- Shock. *Bull. School Med. Univ. Maryland*, 46:61, 1961.
- BUNTON, R. W., NINOMIYA, H., HAINES, B. W., and MICHAELIS, M.: Lactic Dehydrogenase in Rat Brain Mitochondria and Cytoplasm in Noble-Collip Drum Shock. *Enzymologia*, 23:15, 1961.
- BUNTON, R. W., NINOMIYA, H., and MICHAELIS, M.: Action of CEB on Respiratory Enzymes of Rat Brain in Traumatic Shock. *Proc. First Internat. Pharmacol. Meeting*, 1961.
- BUNTON, R. W., BLAIR, E., COWLEY, R. A., MANSBERGER, A. R.: The Use of Hypothermia in Septic Shock. *J.A.M.A.*, 178:148, 1961.
- CUNNINGHAM, R. C.: Massive Gastrointestinal Hemorrhage in the Upper Age Groups. *Bull. School Med. Univ. Maryland*, 47:3, 1962.
- FLOTTE, C. T.: The Problem of Detection of Asymptomatic Surgical Lesions. *Surg. Clinics N.A.*, 41:1425, 1961.
- HULL, H. C., OUGHTERSON, A. W., SUTHERLAND, F. A., and GREINER, D. J.: Chapter V—Wound Ballistics in *Study on Wound Ballistics—Bougainville Campaign*. Dept of the Army, 1962.
- JELENKO, C., III: Duplication of the Duodenum: A Review and Report of a Case. *Ann. Surg.*, Vol. 28, March, 1962.
- MANSBERGER, A. R., BLAIR, E., BUNTON, R. W., and COWLEY, R. A.: The Use of Hypothermia in Septic Shock. *J.A.M.A.*, 178:916, 1961.
- MANSBERGER, A. R.: Value of Peritoneal Fluid Ammonia Levels in the Differential Diagnosis of the Acute Abdomen. *Ann. Surg.*, Vol. 155, June, 1962.
- MANSBERGER, A. R. and NOER, R. J.: Effectiveness of Thio-Tepa (Triethylenethiophosphoramide) as Adjuvant to Radical Mastectomy for Breast Carcinoma. *Ann. Surg.*, Vol. 154, October, 1961.
- MICHAELIS, M., NINOMIYA, H., and BUNTON, R. W.: A Note on Adenosine and Adenylate Deaminases in Brain and Quadriceps Muscle of the Rat in Noble-Collip Drum Shock. *Bull. School Med. Univ. Maryland*, 46:61, 1961.
- MICHAELIS, M., BUNTON, R. W., NINOMIYA, H., and HAINES, B. W.: Lactic Dehydrogenase in Rat Brain Mitochondria and Cytoplasm in Noble-Collip Drum Shock. *Enzymologia*, 23:15, 1961.
- McLAUGHLIN, J., VAN ESK, W., THAYER, W., ALBRINK, W. A., and HAYES, M. A.: Gastric Sarcoidosis. *Ann. Surg.*, 153:283, 1961.
- McLAUGHLIN, J., HAYES, M. A., HUTCHIN, P.: Renal Response to Acidosis During Anesthesia and Operation: I. The Effect of Acute Dilutional Hyponatremia on Hydrogen Ion and Free Water Excretion During Metabolic Acidosis in Anesthetized Dogs. *Ann. Surg.*, 154:9, 1961.
- McLAUGHLIN, J., HUTCHIN, P., and HAYES, M. A.: Renal Response to Acidosis During Anesthesia and Operation: II. The Effect of Operative Trauma on Hydrogen Ion and Free Water Excretion During Metabolic Acidosis. *Ann. Surg.*, 154:145, 1961.
- McLAUGHLIN, J., HUTCHIN, P., and HAYES, M. A.: Renal Response to Acidosis During Anesthesia and Operation: III: Maintenance of Homeostasis in Acute Respiratory Acidosis During Intravenous Infusion of Ringers Lactate and 5 Per Cent Glucose in Water. *Ann. Surg.*, 154:161, 1961.
- NINOMIYA, H., HAINES, B. W., MICHAELIS, M., and BUNTON, R. W.: Lactic Dehydrogenase in Rat Brain Mitochondria and Cytoplasm in Noble-Collip Drum Shock. *Enzymologia*, 23:15, 1961.
- NINOMIYA, H., BUNTON, R. W., and MICHAELIS, M.: Action of CEB on Respiratory Enzymes of Rat Brain in Traumatic Shock. *Proc. First Internat. Pharmacol. Meeting*, 1961.
- PIERPONT, R. Z.: Peptic Ulceration of the Stomach and Duodenum. *J. South Carolina M. Assoc.*, November, 1961.

Division of Neurological Surgery

- CROSBY, R. M. N.: The Neurotoxic Effects of Phenothiazine Compounds. *Bull. School Med. Univ. Maryland*, 46:65, 1961.
- CROSBY, R. M. N.: The Floppy Infant. *J. Pediat.*, 59:30, 1961.
- MOSBERG, W. H., JR. and THOMPSON, R. K.: Lumbar Puncture: Common Sources of Error. *Bull. School Med. Univ. Maryland*, 46:29, 1961.
- THOMPSON, R. K. and MOSBERG, W. H., JR.: Lumbar Puncture: Common Sources of Error. *Bull. School Med. Univ. Maryland*, 46:29, 1961.

Division of Otolaryngology

BLANCHARD, C. L. and BORSANYI, S. J.: Ionizing Radiation and the Ear. *J.A.M.A.* In press.

BLANCHARD, C. L. and BORSANYI, S. J.: Asymptomatic Parotid Swelling and Isoproterenol. *Laryngoscope*. In press.

BLANCHARD, C. L. and BORSANYI, S. J.: Frequency Distribution Analysis of Heart Sounds. *Bull. School Med. Univ. Maryland*. In press.

BLANCHARD, C. L.: Asymptomatic Parotid Enlargement in Alcoholic Cirrhosis. *South M. J.*, June, 1961.

BLANCHARD, C. L. and BORSANYI, S. J.: Asymptomatic Enlargement of the Parotids Due to the Use of Isoproterenol. *Maryland M. J.*, October, 1961.

BLANCHARD, C. L. and BORSANYI, S. J.: Psychogalvanic Skin Response Olfactometry. *Ann. Otol. Rhinol. Laryngol.*, April, 1962.

BLANCHARD, C. L. and BORSANYI, S. J.: The Decompressing Action of Urea on the Labyrinth. *Bull. School Med. Univ. Maryland*, 47:37, 1962.

BLANCHARD, C. L. and BORSANYI, S. J.: Psychogalvanic Skin Response as an Objective Method of Olfactometry. *Bull. School Med. Univ. Maryland*, 47:10, 1962.

BLANCHARD, C. L. and BORSANYI, S. J.: The Use of Computers in Auditory Research. *Bull. School Med. Univ. Maryland*, 47:25, 1962.

BORSANYI, S. J. and BLANCHARD, C. L.: Ionizing Radiation and the Ear. *J.A.M.A.* In press.

BORSANYI, S. J.: Glomus Jugulare Tumors. *Laryngoscope*. In press.

BORSANYI, S. J.: Vitamin A Deficient Diet and Parotid Swelling. *J. Am. Clin. Nutrition*. In press.

BORSANYI, S. J.: Asymptomatic Parotid Swelling and Isoproterenol. *Laryngoscope*. In press.

BORSANYI, S. J.: Chronic Asymptomatic Enlargement of the Parotid Glands. *Ann. Otol. Rhinol. Laryngol.* In press.

BORSANYI, S. J., BLANCHARD, C. L., and CARTER, J. F.: Frequency Distribution of Heart Sounds. *Bull. School Med. Univ. Maryland*. In press.

BORSANYI, S. J. and BLANCHARD, C. L.: Asymptomatic Parotid Enlargement in Alcoholic Cirrhosis. *South. M. J.*, June, 1961.

BORSANYI, S. J. and BLANCHARD, C. L.: Asymptomatic Enlargement of the Parotids Due to the Use of Isoproterenol. *Maryland M. J.*, October, 1961.

BORSANYI, S. J. and BLANCHARD, C. L.: Psychogalvanic Skin Response Olfactometry. *Ann. Otol. Rhinol. Laryngol.*, April, 1962.

BORSANYI, S. J. and BLANCHARD, C. L.: The Decompressing Action of Urea on the Labyrinth. *Bull. School Med. Univ. Maryland*, 47:37, 1962.

BORSANYI, S. J. and BLANCHARD, C. L.: Psychogalvanic Skin Response as a Method of Objective Olfactometry. *Bull. School Med. Univ. Maryland*, 47:10, 1962.

BORSANYI, S. J.: Laryngocele. *Laryngoscope*, December, 1961.

BORSANYI, S. J.: Effects of Radiation Treatment on the Ear. *South. M. J.*, June, 1962.

BORSANYI, S. J.: Electrodesiccation of the Tonsils. *J.A.M.A.*, June, 1962.

BORSANYI, S. J.: Rupture of the Carotids Following Radical Neck Surgery in Radiated Patients. *Ear, Nose & Throat Monthly*, June, 1962.

BORSANYI, S. J. and BLANCHARD, C. L.: The Use of Computers in Auditory Research. *Bull. School Med. Univ. Maryland*, 47:25, 1962.

CARTER, J. F., BORSANYI, S. J., and BLANCHARD, C. L.: Frequency Distribution Analysis of Heart Sounds. *Bull. School Med. Univ. Maryland*. In press.

CARTER, J. F.: Speech Disorder of Children. *J. Maryland Dental Assoc.*, April, 1962.

Division of Thoracic Surgery

ATTAR, S., COWLEY, R. A., TISCHLER, M., and TAMRES, A.: An Automatic Cardiac Monitor-Pacer. *Bull. School Med. Univ. Maryland*, 47: , 1962.

ATTAR, S., TISCHLER, M., TAMRES, A., and COWLEY, R. A.: A New Portable Defibrillator Above Sixty Cycles. *Bull. School Med. Univ. Maryland*, 46:8, 1961.

ATTAR, S. and NAIB, Z.: Cytologic and Clinical Study of Endobronchial Hamartoma. *Dis. Chest*, 41:468, 1962.

- BLAIR, E., BUXTON, R. W., COWLEY, R. A., and MANSBERGER, A. R.: Hypothermia in Septic Shock. *J.A.M.A.*, 178:916, 1961.
- BLAIR, E., COWLEY, R. A., ESMOND, W. G., and ATTAR, S.: Metabolic Effects of Cessation of Circulation at Various Levels of Hypothermia. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- BLAIR, E., COWLEY, R. A., ATTAR, S., and ESMOND, W. G.: High Flow Cooling for Profound Hypothermia. The Prevention of Metabolic Acidosis in Clinical Cardiac Surgery. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- COWLEY, R. A., ESMOND, W. G., ATTAR, S., STRAM, J., DEMETRIADES, A., JURF, A., and GOLD, M.: Profound Hypothermia with Simplified Equipment—A Disposable Stainless Steel Blood Heat Exchanger of High Efficiency. *J. Thor. Cardiovasc. Surg.*, 42:563, 1961.
- COWLEY, R. A., TISCHLER, M., ATTAR, S., and TAMRES, A.: Cardiac Defibrillation above 60 Cycles with a Portable Square-Wave Defibrillator. *Surgery*, 51:207, 1962.
- COWLEY, R. A., BLAIR, E., ESMOND, W. G., and ATTAR, S.: Metabolic Effects of Cessation of Circulation at Various Levels of Hypothermia. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- COWLEY, R. A., ATTAR, S., ESMOND, W. G., and BLAIR, E.: High Flow Cooling for Profound Hypothermia. The Prevention of Metabolic Acidosis in Clinical Cardiac Surgery. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- COWLEY, R. A., TISCHLER, M., TAMRES, A., and ATTAR, S.: An Automatic Cardiac Monitor-Pacer. *Bull. School Med. Univ. Maryland.*, 47: , 1962.
- COWLEY, R. A., ATTAR, S., TISCHLER, M., and TAMRES, A.: A New Portable Defibrillator Above Sixty Cycles. *Bull. School Med. Univ. Maryland*, 46:8, 1961.
- ESMOND, W. G., COWLEY, R. A., ATTAR, S., DEMETRIADES, A., HACKETT, P., HOLLINGSWORTH, N., FRAZONE, J., BAKER, B., KAESTNER, R., HURDLE, E., CARSKI, T., and BULLINGER, R.: A Versatile Pump—Oxygenator System with Disposable Components. *Proc. Bio-Med. Eng. Symposium*, 1961.
- ESMOND, W. G., BAKER, B., and ATTAR, S.: An Improved Spring Loaded Single Roller 360° Blood Pump. *Trans. Am. Soc. Artif. Int. Organs*. Vol. 7, 1961.
- ESMOND, W. G., ATTAR, S., STRAM, J., DEMETRIADES, A., JURF, A., GOLD, M., and COWLEY, R. A.: Profound Hypothermia with Simplified Equipment: A Disposable Stainless Steel Heat Exchanger of High Efficiency. *J. Thor & Cardiovas. Surg.*, 42:563, 1961.
- ESMOND, W. G., BLAIR, E., COWLEY, R. A., and ATTAR, S.: Metabolic Effects of Cessation of Circulation at Various Levels of Hypothermia. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- ESMOND, W. G., COWLEY, R. A., ATTAR, S., and BLAIR, E.: High Flow Cooling for Profound Hypothermia. The Prevention of Metabolic Acidosis in Clinical Cardiac Surgery. *Proc. Fac. Med. Chir. Exper.*, September, 1961.
- LINBERG, E., MILLER, J., ATTAR, S., and SAUER, E.: Tuberculosis Surgery in Maryland State Hospitals. *Maryland M. J.*, June, 1961.
- LINBERG, E.: Lung Reimplantation in the Dog. *J.A.M.A.*, 178:486, 1961.
- TISCHLER, M., TAMRES, A., and COWLEY, R. A.: Automatic Cardiac Monitor. *Digest of 1961 Internat. Conf. Medical Electronics*.
- TISCHLER, M., COWLEY, R. A., TAMRES, A., and ATTAR, S.: An Automatic Cardiac Monitor-Pacer. *Bull. School Med. Univ. Maryland*, 47: , 1962.
- TISCHLER, M.: Cardiac Defibrillation Above 60 Cycles with a Portable Square Wave Defibrillator. *Surgery*, February, 1962.
- TISCHLER, M., ATTAR, S., TAMRES, and COWLEY, R. A.: A New Portable Defibrillator Above Sixty Cycles. *Bull. School Med. Univ. Maryland*, 46:8, 1961.

Division of Urologic Surgery

- GALLENIER, E. P., JR. and YOUNG, J. D., JR.: Pudendal Block and Neurectomy in Bladder Neck Obstruction. *South. M. J.*, December, 1961.
- MENDONCA, PAUL DE and YOUNG, J. D., JR.: Reversal of Hypertension from Segmental Renal Ischemia by Ligation of Segmental Artery. *Surg. For.*, Vol. 12, October, 1961.

Continued on p. xxii

An Age of Miracles

DR. ABRAHAM SHUSTERMAN

IT IS WITH MIXED FEELINGS of humility and pride that I respond to the introduction by my old friend, our former Governor, Theodore R. McKeldin. To hear his words of tribute which are greatly exaggerated and to realize that I am the principal speaker at a luncheon attended by such outstanding orators as Ted McKeldin and my beloved friend and host, Dr. John Krantz, make me feel unworthy of the honor and inadequate to the demands of the hour. I ask for your indulgence and your charity. There is an element of pride in the thought that I, as a rabbi, have been asked by the authorities of a most distinguished department of a great medical college to be their speaker at a traditional Christmas luncheon. I may be the first rabbi to be so honored; I hope I am not the last. This is a sign of our growing relationship of brotherhood and fellowship. In itself this is the miracle and with Harry Golden I say gratefully "Only in America."

By a wonderful coincidence the Jews of the world will usher in a great festival tonight. At sundown we will light the first of the Channukah candles, increasing the number each night until eight lights burn in our candelabra in home and synagogue. This festive season reminds us of the struggle in the days of Antiochus Epiphenes of Syria who attempted to Hellenize tiny Judaea. The whole story is related in the books of the Maccabees in the Aprocrypha. It is the

story of an early attempt at regimentation, comparable to those similar attempts by Hitler and Stalin, by the Nazis and the Communists of yesterday and today. Many sacred rites were forbidden and a statue of Zeus Olympus was placed in the altar of the Holy Temple in Jerusalem. The Jews were ordered to give up their ancestral monotheism and to become exactly like their pagan conquerors.

Of course the people of Israel rebelled. Their revolt began in the small town of Modin, when one of the Jews bowed down at the altar of a foreign god. The aged Hebrew priest Mattathias smote the offender and spoke the words which rallied the Jews to the banner of God. He cried, "Those who are for the Lord follow me." His people followed him. His own sons, led by the valiant Judah, called the Maccabee or the Hammerer, became the outstanding generals of Israel. Waging guerrilla warfare they defeated the army of Antiochus which outnumbered them and possessed more adequate equipment but "it was one with the Lord to save by many or by few." Then came the hour when the Jews cleaned their Temple and rededicated it to the God of their fathers. The occasion was called Channukah which means "Dedication" and it became a holy season from year to year. To this day it is one of Israel's most joyous celebrations. We exchange gifts; recite prayers; sing songs and praise the Holy Name of God. What makes the occasion even more significant is the fact that the Maccabean struggle is the prototype of all wars of independence in human history. It was the first (or one of the first) wars to

An address by the Rabbi of Har Sinai Congregation of Baltimore presented at the luncheon of the Department of Pharmacology, School of Medicine, University of Maryland, on December 21, 1962.

preserve man's right to worship freely, according to the dictates of his conscience. Thus the holy festival that begins for us Jews today at sundown is really one of universal significance. We sing a glorious hymn that contains these wonderful words of hope, "Yours the message cheering that the time is nearing which will see all men free, tyrants disappearing."

Now there is a legend (I repeat, a *legend*) that when the hour of the dedication of the old Temple drew near the Hebrew priests searched for consecrated oil, bearing the seal of the chief of the Priests. Only enough oil for one day was found. It was poured into the candelabra and the miracle occurred. The oil, sufficient for only one day, burned for eight days and for this reason, says Jewish tradition, the holy days are eight in number. Of course, there is also the more reliable historic fact that in the autumn months, because of the war with Syria, the Jews had to pass up the observance of the festival of Succos or Tabernacles. This also lasts eight days and scholars tell us that Channukah may be a postponed Succos. However, it hardly matters. We know that miracles happen. That I am your speaker today is a miracle of history. The advance of medical science is itself a miracle. That in our world in which life evolved through stages of human selfishness and greed, through stages of the most savage struggle of all the species, we should be talking about the ministry of healing and the advance of brotherhood—this is my idea of a miracle. I cannot explain how it happened but it did. Little wonder that I will pray tonight, as will all Jews, "Praised be Thou, O Lord our God, King of the Universe who didst perform miracles for our fathers in those days and in this season of the year." Note

that the past was a time of miracles but so is the present.

There is something inspiring about the thought that tonight Channukah will begin for us and the coming Tuesday is Christmas. As an American child I learned all about Christmas from the environment of which we all are part, and I know that while our society tends to secularize our sacred observances, there is a tremendous religious spirit let loose in the world at this time of the year. In my book, the thought of "peace on earth; good-will to men" is the very essence of the Christianity and the Judaism I have been taught to respect. It may sound naïve but I like to think of the coincidence of Channukah and Christmas. In my mind there is a picture of Jews at prayer and Christians at prayer, with these prayers merging and ascending toward God's throne. That heaven is stormed by the devotion of both groups is my assurance that God will smile on us, saying, "Both families of my children are now joined in worship, each in his own tongue and each in his own shrine." May He hear and answer our petitions for peace and security for all His children!

There is one thought that does not frighten me at all. There is nothing to disturb us about religious differences. It is a truism that each of us is an individual and differs from all other people on the face of the earth. It is rather pleasant to reflect that of all the billions of human beings of yesterday, today, and tomorrow there is not one who has identical fingerprints with any other. Differences, when accepted in the right way, make for enrichment. In fact, a cursory study of history convinces me that we may be living in the best of times. A few years ago I delivered a paper to an organization of professional men of which

some of you are members. My theme was the "milieu in which Jesus was born." This essay drew heavily on some of the newly-discovered scrolls which show us how many Jewish sects there were in those days. If I remember correctly, the Talmud teaches that there were about four hundred synagogues in Jerusalem at that time. My own estimate is that there are just about as many churches of all denominations now existing in Baltimore. Ecumenicity has not advanced very far among us and in Judaea there were reasons for so many houses of prayer. One of these reasons was the fact that people wanted them in order to express in prayer their individual convictions about God and His Will. We know the names of some of these groups and we know something about their religious needs.

One group was known as the Sadducees. This was led by priests who became leaders of religion by virtue of their birth. They were born into families of the tribe of Levi. Some were "ordinary" priests while only the descendants of the house of Aaron and more particularly the offspring of the priest Zadok were eligible for the high priesthood. By and large an hereditary group of this kind inclines toward conservatism, wanting to preserve the *status quo*. So it was with the Sadducees. In Roman times they were willing to make peace with their conquerors. They rejected the new doctrine of immortality and insisted on a literal interpretation of Scripture. These were the fundamentalists of ancient Israel. They were also the so-called aristocrats.

The Pharisees objected to them and rejected their leadership. In their opinion a person deserved to be a leader not because of birth but because of his education, training, and character. This group

established a new lay leadership to oppose the Sadducees and really paved the way for the coming of a rabbinic party to replace the priestly. The rabbis were laymen who were educated for their jobs. At first, they had other occupations. We know that Paul was a tent-maker; there were cobblers and blacksmiths and tailors who served also as rabbis and teachers. That their titles were purely honorary is seen from the fact that Jesus was a carpenter, but was called "Rabbi" by his disciples. The Pharisees were clearly liberal, believing that Scripture had to be interpreted with liberality in order to permit progress. Thus it was that the Sabbath became a day of rejoicing and not a "blue" Saturday; the doctrine of "an eye for an eye" was modified by the establishment of a rule of damages or monetary compensation for injuries. These Pharisees believed that it was more important to pray, to study, and to give charity than to offer animal sacrifices on the altar of the Temple. In fact, they established the synagogue as a substitute for the Temple. The Temple was a place of animal sacrifice: the synagogue became the model for the modern church and synagogue. It was a place to which people came for worship, for learning, and for fellowship. Then, the Pharisees accepted new doctrines like that of the immortality of the soul. It is interesting to read some of their teachings about the soul, about the duty of man, and about the freedom of the will. One of their tasks was to preserve the concept of God's sovereignty and, at the same time, to leave room for freedom of man's will. It was not an easy task and worthy of the greatest philosophic minds of all the generations.

Among other sects was that of the Essenes of whom we read so much in

the Dead Sea Scrolls. This was a mystical, monastic group from which undoubtedly John the Baptist came. Like John (Matthew III) these Essenes wore plain, rough clothes, ate simple food and preached a doctrine of repentance. They seemed to believe that God's kingdom was about to come and, therefore, our task was not to store up worldly goods, but rather to repent of our sins in order to be worthy of entering into the future kingdom of heaven. They cried, "Repent ye; for the kingdom of heaven is at hand." These Essenes were itinerant preachers; they lived in monasteries, one of which was by the Dead Sea; most of them were middle-aged because, having raised their families, they gave up their home-life to become members of the monastic group. No man had private property; their possessions belonged to the community. One of their most characteristic rites was a ceremony of purification by the use of water. It was called "baptism" and that is how John got his name; he was a "baptiser" along with his fellow-Essenes.

From the teachings of Jesus you can see what the influences were in his life. Certainly as a visitor in Jerusalem, as a Galilean who went to the synagogues, he knew members of all these groups and he heard them preach. In all probability, there were times when there was great tension among these zealous religionists. For example, in Matthew XXII there are two incidents, one concerning the Pharisees and one the Sadducees. Each sought to question Jesus about his views because the Pharisees wondered how Jesus could harmonize his loyalty to God with the Roman rule and the Sadducees suspected Jesus of agreeing with the Pharisees on the question of resurrection. It was at this point that a Pharisee asked him about the greatest of the command-

ments and Jesus referred to the two well-known Jewish commandments about the love of God (Deuteronomy VI:5) and the love of one's neighbor (Leviticus XIX:18).

Why do I dwell on these events of history? Merely to point out that this is not the first age to face differences in religion, even among members of the same denomination, and this is not the only generation called upon to live within the framework of honest differences. Our television panel has adopted this motto: that we "agree to disagree agreeably." This is the spiritual demand of the hour. That we have been able to advance so far is one of the great miracles of history.

I will not attempt to define specifically what the forces have been and what we have been able to achieve. Just recently some of us attended a wonderful conference in Washington where we heard a great speaker discuss some of the differences we face. One sentence impressed me as being not only marvelous but truly prophetic. He said, "We have learned that the major differences are *not* between denominations but *within* denominations." Our fellowship, our cooperation, our like-mindedness usually cuts across denominational lines and that is the way it should be. Otherwise there would be hope only in a monolithic society. To some extent credit for this new climate of opinion should go to a great man in Rome. Pope John XXIII has opened windows and let fresh air come into many of our lives. He has helped to create a new climate of opinion for all denominations to work in. While Jews are not part of the ecumenical group that met in Rome, it is true that Pope John has extended the hand of fellowship to my people in a most inspiring way. He greeted a delegation of American Jews

who visited the Vatican with these Biblical words, "I am Joseph, your brother."

The response to the appeal of the Pope has been reciprocal. Nothing stands in the way of brotherly love. There is now in prospect a conference of all the religious groups to be held in Chicago early next year. The purpose of this conclave will be to deal with the question of Religion and Race. While this meeting is long overdue, it is about to take place and this is another of the modern miracles. Only good can come of it. Everywhere in our land people are talking about cooperation among the religions and the advance of brotherhood. Everywhere dialogue groups are coming into being. Walls are breaking down in the spirit of the poem of Robert Frost, "There is something that hates a wall; that wants it down." In my judgment we are not far from the time when our own state will have a public accommodations law and people of the darker races will not have to face the embarrassment of refusal and rejection. Such treatment is a denial of the Judaism and Christianity in whose names I believe I am now speaking.

It is possible for any of us to draw on his own personal experience to illustrate the points of view we regard as important. I confess that from earliest childhood I have had little to endure from man's inhumanity to man, but I was privileged to be born in the United States and to have lived, as I now live, among people whom I love because they are worthy of love. Among them are some of

you, men of all three of the major religions. In my ministry in Athens, Georgia, Tulsa, Oklahoma, and Baltimore there is the continuing story of kindness and helpfulness by the clergy and the laity of all groups. But I am not blind to such forces as anti-semitism, anti-Catholicism, anti-liberalism.

What pleases me is a growing sense of trust that seems to be part of the new climate. In twenty years I was not invited once to address a parent-teacher group at any of the Catholic schools. In the past year there have been a few invitations from such groups. A few months ago in the company of my television colleagues I spoke to the candidates for the priesthood at our local St. Mary's Seminary. We were warmly received. I came to this luncheon directly from that seminary where I visited one of the faculty who wanted his class to present me to the boys who greeted me like an old friend.

I hope that this is what I think it is—a sign that we have replaced our suspicions with trust; that we see the sincerity in one another and are resolved to respect it; that we are going to learn from one another and lend a helping hand. In a democracy men can live and let live, but the kind of democracy I want to live in is the one in which men of all groups live and help live. If we can achieve this ideal, nothing in the world can stand in the way of an America whose spirit goes marching on. May God help us to perform this miracle which will be of His doing and ours.

BOOK REVIEWS

Congenital Cardiac Diseases: A Review of 357 Cases Studied Pathologically. Robert S. Fontana, M.D., and Jesse E. Edwards, M.D. Pp. 291. W. B. Saunders Co., Philadelphia, Pa. 1962.

The authors of this review have utilized autopsy specimens of cardiovascular malformations studied at the Mayo Clinic and other sources over a 30-year period.

The purpose of this review is to present: "1. The incidence of congenital cardiac disease among persons examined at necropsy at the Mayo Clinic; 2. The frequency of occurrence of various types of cardiovascular malformations among patients represented in the pathological material; 3. The length of survival of those patients with cardiovascular malformations who are represented in this collection; 4. The distribution on the basis of sex of these patients; and 5. The incidence of certain complicating conditions among the patients."

The authors readily admit that the above statistics can only be considered valid in regard to the 357 specimens reviewed, and that any attempt to apply these figures to the overall occurrence of congenital cardiac malformations would be inaccurate. However, they have done much to enhance the worth of their review by presenting the pooled experience of many other pathologic studies at other institutions; in this effort they have listed and commented on many of the 1,166 references from

the accumulated medical literature on this subject.

This book can best be described as a statistical analysis of pathological specimens of case material from the Mayo Clinic and a review of the literature on the subject, which may assist both the pathologist and clinician by giving them some idea of what to expect when confronted with a patient with a congenital cardiac malformation.

WILLIAM WEGGLICKI, M.D.

Aids to Anatomy, (pocket anatomy), by R. J. Last, 12th ed., Balliere Tindall and Cox, London, 1962 (Williams & Wilkins Company, Baltimore, Md.), pp. 408, ill. \$3.50.

This traditional abstract of anatomy indicates a continuing use for a simplified review outline for undergraduate and postgraduate students anticipating examinations or for the meticulous practitioner whose perfection demands a periodic review of basic science. The individual chapters carry diagrammatic sketches pertinent to the more difficult subjects. Classifications are included. Despite its small size, the volume is amazingly complete and serves excellently as a review medium for those who have had previous academic training in gross anatomy.

JOHN A. WAGNER, M.D.

Continued from p. xvi

POWDER, J. R. and YOUNG, J. D., JR.: Flank Cutaneous Ureterostomy and Ureteroureteral Cutaneous Neostomy. *New York State M. J.*

YOUNG, J. D., JR. and POWDER, J. R.: Flank Cutaneous Ureterostomy and Ureteroureteral Cutaneous Neostomy. *New York State M. J.*

YOUNG, J. D., JR., MADELOFF, M. S., SCHWARTZ, F. D., BORGES, F. J., ENTWISLE, G., REVELL, S. T. R., JR.: Differential Renal Clearance Patterns in the Evaluation of Hypertension. *J. Urol.*, March, 1962.

YOUNG, J. D., JR. and MENDONCA, P. DE: Reversal of Hypertension from Segmental Renal Ischemia by Ligation of Segmental Artery. *Surg. Forum*, Vol. 12, October, 1961.

YOUNG, J. D., JR. and GALLEHER, E., JR.: Pudendal Block and Neurectomy in Bladder Neck Obstruction. *South. M. J.*, December, 1961.

YOUNG, J. D., JR., BRADLEY, J. E., and LENTZ, G.: Polycythemia Secondary to Pheochromocytoma. *J. Urol.*, July, 1961.

YOUNG, J. D., JR.: Renovascular Hypertension. Heart Page. *Maryland M. J.*, June, 1961.



OFFICERS

President

GEORGE H. YEAGER, M.D.

President-Elect

GIBSON J. WELLS, M.D.

Vice-Presidents

WYLIE M. FAW, JR., M.D.

PHILIP A. INSLEY, M.D.

HUGH W. WARD, M.D.

Secretary

FRANCIS J. BORGES, M.D.

Treasurer

HOWARD B. MAYS, M.D.

Executive Director

WILLIAM H. TRIPLETT, M.D.

Executive Secretary

MRS. LOUISE GIRKIN

Board of Directors

EDWARD F. COTTER, M.D.

LAWRENCE M. SERRA, M.D.

RAMSEY B. THOMAS, M.D.

THEODORE E. WOODWARD, M.D.

F. FORD LOKER, M.D.

NATHAN E. NEEDLE, M.D.

HOAROLD P. BIEHL, M.D.

RENNERT M. SMELSER, M.D.

JOSEPH D'ANTONIO, M.D.

FRANK K. MORRIS, M.D.

(ex-officio)

ARTHUR G. SIWINSKI, M.D.

(ex-officio)

Nominating Committee

ARTHUR G. SIWINSKI, M.D.

FRANK K. MORRIS, M.D.

PATRICK PHELAN, M.D.

AARON C. SOLLOD, M.D.

J. KING B. E. SEEGAR, M.D.

Representatives to General Alumni Council

ARTHUR G. SIWINSKI, M.D.

FRANK K. MORRIS, M.D.

WILLIAM H. TRIPLETT, M.D.

Representatives, Editorial Board, Bulletin

JOHN HORNBAKER, M.D.

HARRY M. ROBINSON, JR., M.D.

JOHN E. SAVAGE, M.D.

C. VERNON WILLIAMSON, M.D.

GEORGE H. YEAGER, M.D.

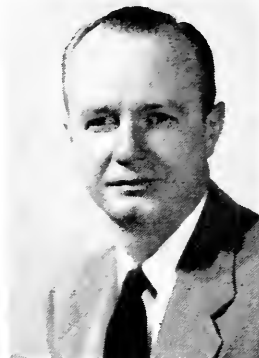
(ex-officio)

Representatives, Advisory Board, Faculty

FRANK K. MORRIS, M.D.

ARTHUR G. SIWINSKI, M.D.

ALUMNI ASSOCIATION SECTION



President's Letter

Dear Fellow Alumni:

The University of Maryland School of Medicine was founded in 1807, making it the fifth medical school to be established in the United States. The Medical School building was constructed in 1812 and has been in continuous use since that time.

Containing "chemical" and "anatomical" halls, it has been the symbol of the Medical School, and to graduates returning to the Baltimore campus, it is their "mecca." Although it was built as a copy of the Pantheon in Rome, my personal impression is that it is a more charming and cheerful building than the original Pantheon. At the time of its construction, it was considered a marvel of architecture and engineering, particularly since structural steel was not used. Tradition tells us that originally the interior was even more attractive than the exterior.

The Baltimore campus is now undergoing a tremendous upheaval and many of its landmarks are disappearing. More than ever, we should make every attempt to hold on to that which is good. The exterior of the "Medical School" building has undergone a face lifting and a new copper dome has replaced the old one.

Much needs to be done to the interior. Once inside the building, it is anything but a show place. The staircases "creak," the floors are rickety, and in no area does it present its original "colonial" touch of beauty and charm.

With the rejuvenation of downtown Baltimore, many visitors will anticipate seeing some of "old Baltimore." Being contiguous to the Civic and Charles Centers, and contemplated hotel and restaurant developments, wouldn't it be advantageous to show our historical background and this wonderful building? The Alumni should encourage interested civic and historical groups to procure funds for the authentic restoration of this architectural gem.

GEORGE H. YEAGER, M.D.
President

Reunion to Be Held at 1963 AMA Meeting

DR. GEORGE H. YEAGER, President of the Medical Alumni Association, has announced that a reunion of the Alumni of the School of Medicine will be held on the occasion of the annual meeting of the American Medical Association in June, 1963.

Each alumnus will receive a detailed notice of this function and, if attending the AMA annual meeting, is requested to register at the University of Maryland desk.

Such reunions in the past have been a huge success. It is hoped that Alumni planning to attend the AMA convention will include the Medical Alumni Reunion in their plans.

ALUMNI DAY—JUNE 6, 1963



**1963 Honor Award
and Gold Key
of the Medical Alumni
Association
to
Louis A. M. Krause
Class of 1917**

LOUIS A. M. KRAUSE, Professor of Clinical Medicine at the University of Maryland School of Medicine, was born in Baltimore, Md., in 1896, the son of William B. and Elizabeth Krause. After preliminary education in the Public Schools of Baltimore, he was graduated from the Baltimore City College in the Class of 1913. Four years later and at the beginning of the first great world war, he received the M.D. degree from the College of Physicians and Surgeons and the University of Maryland School of Medicine. As a medical officer he joined the A.E.F., was assigned to the First Division, Field Hospital 13, and saw service at St. Mihiel and later with the Army of Occupation. Following military service, he served for a year on the staff of the Rockefeller Institute in New

York, with a chief interest in the problems of pneumococci and pneumococcal pneumonia. He then returned to Baltimore to begin the practice of Internal Medicine.

Growing in academic stature, he undertook teaching assignments at the University of Maryland, Mercy Hospital, and as Consultant in Medicine at the Baltimore City Hospitals where he conducted teaching rounds on the Medical Service. In 1938, he was invited to become Chief of the Medical Service at the Lutheran (formerly West Baltimore General) Hospital, a position he has held continuously ever since.

In 1928, he was honored by Fellowship in the American College of Physicians and by membership in the American Board of Internal Medicine in 1937.

A year later he was made a member of the American Therapeutic Society. During 1941 and 1942 he served as Governor of Maryland for the American College of Physicians.

During the 1930's, Dr. Krause became pre-eminently known for the excellence of his patient, thorough, and searching clinical bedside studies. An inspiring teacher, a student always interested in others, he was instrumental in the training of many now prominent and influential practitioners. He was among the first in Baltimore to indicate the growing problem of the aged and has served actively on many committees charged with studies of aging and with the planning of resources for the care of the chronically ill. To this end he devoted many hours at the City Hospitals, combining careful clinical observation and study with his broad and diverse familiarity with scientific information, even calling upon his profound knowledge of the scriptures when points of emphasis were needed.

With the onset of World War II he again entered the military service, and from 1942-43 was Chief of the Medical Services at the Walter Reed Army Hospital in Washington. Becoming interested in the problems of exposure as related to military service, he performed invaluable research and contributed extensively to the knowledge of so-called "trench foot." For this he was awarded the Ribbon of Merit.

Krause, the student, found in the cessation of hostilities a new opportunity for further study. He became a member of the School of Oriental Research at Jerusalem and was a member of an archaeological expedition to South Arabia in 1950 and in 1958 to Oman on the Persian Gulf, both expeditions being under the auspices of the Ameri-

can Foundation for the Study of Man. Not alone did he contribute to the archaeological adventure, but found time to study in detail local diseases particularly in the kingdom of Yemen and on several occasions organized clinics where many hundreds received free care.

Peripatetic, yes—yet sufficient in capacity to fill the exacting requirements of hospital staff committees, administrative problems, and teaching assignments in several hospitals. He has continually kept abreast of his first love, books, and particularly the scriptures. In great demand as a speaker to both lay and medical groups, he has always found time for an active, demanding, clinical practice, yet has been a member of state-wide committees on planning for Medical Education, and has found time for active participation in the activities of the State Medical Society. In 1950, he served as President of the Baltimore City Medical Society. In 1946, he received a citation from Pope Pius XII.

Scientist, astute clinician, humanitarian, scholar, bibliophile, counselor, and friend, he exemplifies the highest ideals of the healing art. His contributions to science have been important, but above all, he has served his fellow man. Proficient, dedicated, and inspiring as a teacher at the bedside, he has influenced more than a generation of young men who by virtue of his teaching and emulation have continued to improve the effectiveness, progress, and prestige of American Medicine and American medical education. Louis Krause has, indeed, contributed outstandingly to medicine. That his service to mankind has been distinguished, there can be no doubt.

Bibliography

- KRAUSE, LOUIS A. M., "For As A Man Thinketh," *Bull. School of Med. Univ. Maryland*, 23:22, July 1938.

KRAUSE, LOUIS A. M., "Dr. Julius Friedenwald," *Ann. Int. Med.*, **15**:343, August 1941.

FREEMAN, I. and KRAUSE, L. A. M., "Multiple Myeloma with Localized Amyloid Deposits; Case Report with Autopsy," *Bull. School Med. Univ. Maryland*, **26**:17, July 1941.

KRAUSE, LOUIS A. M., "Biblical Portrait of Old Age," *Bull. School Med. Univ. Maryland*, **27**:117, October 1942.

CLUNTON, H. E., JR. and KRAUSE, L. A. M., "Acute Lupus Erythematosus Disseminatus," *Ann. Int. Med.*, **19**:843, December 1943.

KRAUSE, L. A. M., WALLACE, J. J. and SILVERMAN, J. J., "Incidence of Palpable Pulsations in Convalescent Trench Foot; Analysis of 500 Patients at Army General Hospital," *Am. J. M. Sc.*, **211**:729, June 1946.

KRAUSE, LOUIS A. M., "Old Age in Bible and Poetry," *Ann. Int. Med.*, **36**:152, January 1952.

KRAUSE, LOUIS A. M., "Salt," *Maryland M. J.*, **1**:277, June 1952.

EDWARDS, M. H., WAGNER, J. A., and KRAUSE, L. A. M., "Sarcoidosis with Thrombocytopenia: Report of A Case," *Ann. Int. Med.*, **37**:803, October 1952.

KRAUSE, LOUIS A. M., "Medicine and the Bible," *Rhode Island M. J.*, **36**:507-511, September 1953.

KRAUSE, LOUIS A. M., "Old Age Through the Ages," *Maryland M. J.*, **6**:680, November 1957.

RAVDIN, J. S., KRAUSE, L. A. M., *et al.*, "Surgical Aspects of Biliary Tract Disease. Symposium," *Maryland M. J.*, **7**:40, January 1958.

KRAUSE, LOUIS A. M., "Medicine and the Bible," *West Virginia M. J.*, **55**:432, December 1959.

KRAUSE, LOUIS A. M., "Why Has Aging Become a Problem?" *Maryland M. J.*, **9**:127, March 1960.

ANDRUS, E. C., FINNEY, G. G., and KRAUSE, L. A. M., "Myocardial Infarction Versus Bladder Disease," *Maryland M. J.*, **9**:304, June 1960.

KRAUSE, LOUIS A. M., "Leprosy," *Maryland M. J.*, **9**:709, October 1960.

LAUGHLIN, H. P., BARTEMEIER, L. H., and KRAUSE, L. A. M., "Psychological Factors in Doctor-Patient Relations," *M. Ann. District of Columbia*, **30**:553, September 1961.

Alumni Day, June 6, 1963

DR. THEODORE E. WOODWARD, Chairman of the Program Committee for Alumni Day, has announced that plans are progressing rapidly for the festivities on June 6. All Alumni will shortly receive an invitation by way of a direct letter from Dr. George Yeager, President of the Board of Directors of the Medical Alumni Association. Detailed announcement will follow giving the scheduled events.

The classes designated as reunion classes are listed below. It is hoped that the addresses will be of interest to the members of the classes who will be celebrating their reunions. You are urged to inform Mrs. Louise Girkin, Executive Secretary, Medical Alumni Association, of any change of address.

Plans for a delightful luncheon served at the Student Union and a gala evening at the annual Alumni Banquet at the Lord Baltimore Hotel are rapidly developing.

Mark your calendar now. Your alumni association is anticipating a large attendance. Join your fellow alumni, your presence is a necessary element for a memorable Alumni Day. The following program will be presented.

Dr. John M. Scott, President of the Class of 1938, will preside.

PROGRAM

1. "Trends of Teaching in Education and Research" by Stanley E. Bradley, M.D., Professor and Head of the Department of Medicine, Columbia University.
2. "A Quarter Century of Mercurial Diuretic Therapy" by Allan Feder, M.D., Clinical Associate Professor of Medicine, Cornell University School of Medicine.

3. "Interesting Medico-legal Problems of the Central Nervous System" by John A. Wagner, M.D., Professor of Neuropathology, University of Maryland.

4. "Unilateral Renal Disease and Hypertension" by John J. Bunting, M.D.

Following the scientific program, the annual business meeting of the Medical Alumni Association will be held, with election of officers. This will be followed by the luncheon in the Student Union Building.

It is anticipated that most of the reunion classes will again follow tradition in holding informal receptions prior to the annual banquet.

At the annual banquet members of the 50-year class will receive their honorary certificates. Guests will be members of the graduating class of 1964. Mr. Eric A. Johnson, former President of the Motion Picture Association of America, will be the speaker at the annual banquet.

Reunion classes and their class captains are as follows:

REUNION CLASSES 1963

Class rosters of the reunion classes are found below. Many addresses are incomplete or inaccurate. These are denoted by an asterisk. Correct addresses are much needed and will be most welcome. You are urged to inform Mrs. Louise Girkin, Executive Secretary, of any such new or corrected addresses.

50th Year Reunion

Class of 1913

Co-Captains: W. H. Toulson, M.D., and Charles Reid Edwards, M.D.

COLLEGE OF PHYSICIANS & SURGEONS

RAFAEL BERNABE
Salvador Brau St. 61, San Juan, P. R.

RAY MAXWELL BOBBITT
1139 4th Ave., Huntington, W. Va.

RALPH ELIJAH CLOWARD
Box 8292 Waukii Sta., Honolulu, Hawaii

JAMES SYLVESTER DIXON
33 Parsonage St., Pittston, Pa.

JAMES CORBIN DOUGHTY
Onancock, Va.

JAMES FENDER EASTON
45 Rosemary Lane, Romney, W. Va.

SAMUEL E. ENFIELD
116 S. Liberty St., Cumberland, Md.

CHAS. WM. FINNERTY
440 Bdwy., Somerville 45, Mass.

PAUL N. FLEMING
8627 Fenton St., Silver Spring, Md.

ERNEST F. FLORA
Boones Mill, Va.

BENJAMIN F. GALLANT
Bethpage, N. Y.* (Not listed in '61 AMA)

E. F. HARBERT
W. Va.* (Not listed in '61 AMA)

ISIDOR HELLER
49 Brandon Rd., Upper Darby, Pa.

FERNANDO H. JANER
Martin Travieson, Santurce, P.R.

WILLIAM T. MAY
10 Patapsco Ave., Baltimore 22, Md.

CHARLES L. MOWRER
159 W. Washington St., Hagerstown, Md.

LEO P. MUSSER
Rt. 3, 500 Vine Hill Way, Martinez, Calif.

WILLIAM EDGAR MYLES
White Sulphur Springs, W. Va.

ALUMNI ASSOCIATION SECTION

CHARLES FRANCIS NICOL
63 Prospect Pk. W., Brooklyn 15, N. Y.
WALTER W. POINT
Box 2563, Charleston 29, W. Va.
SOLOMON REINA
224 Rosecrans St., Manhattan Beach, Calif.*
RAYMOND HARRISON RYDER
48 Central Ave., Waterbury, Conn.

ARMADO SANCHEZ
Cuba* (Not listed in '61 AMA)
ELIAS C. SEGARRA
Ponce de Leon Ave., Stop 19, Santurce, P. R.
ALEXANDER SENEKEWITZ
Address unknown (Not listed in '61 AMA)
FORT STEILACOOM
Washington* (Not listed in '61 AMA)

* Last known address.

BALTIMORE MEDICAL COLLEGE

CHARLES F. BOVE
70 E. Main St., Patchogue, N. Y.
DAWSON L. FARBER
942 Dulaney Valley Rd., Baltimore 4, Md.
ENRIQUE LASSISSE Y RIVERA
Sabana Grande, P. R.
ERNEST G. MARR
516 Cathedral St., Baltimore 2, Md.
VICTOR C. NAH
301 N. Van Buren St., Wilmington 5, Del.

* Last known address.

GEORGE PINESS
240 S. La Cienga Blvd.,
Beverly Hills, Calif.
ROGER K. SELL
Torrington, Wyoming
MAX KAUFMAN SILVERMAN
Address unknown* (Not listed in '61 AMA)
GEORGE L. ZIMMERMAN
1710 Aberdeen Rd., Baltimore, Md. (Not
listed in '61 AMA & not listed in phone
directory)

UNIVERSITY OF MARYLAND

SAMUEL ALLEN ALEXANDER
1830 Eye St., N.W., Washington 6, D. C.
PHILIP BEAN
Great Mills, Md.
FRANKLIN CLYDE CRAVEN
State Hospital, Goldsboro, N. C.
CHARLES REID EDWARDS
Medical Arts Bldg., Baltimore 1, Md.
VERTIE EDWARD EDWARDS
Stokesdale, N. C.
IDELBERTO FAJARDO Y INFANTE
Santiago* (Not listed in '61 AMA)
W. FRANK GEMMILL
121 W. Springettsbury Ave., York, Pa.
HARRY GOLDSMITH
3109 Marnat Rd., Baltimore 8, Md.
LEONARD HAYS
5201 Baltimore Ave., Hyattsville, Md.
HERMAN HARRY LEVIN
(Not listed in '61 AMA)

* Last known address.

FREDERICK L. McDANIEL
44 Northdown Rd., Alexandria, Va.
WILLIAM TILLMAN MARTIN
605 McDaniels Ave., Greenville, S. C.
WALTER ANTHONY OSTENDORF
P. O. Box 1689, Ft. Worth 1, Texas
JESUS MARIA BUCH
Address unknown
HARRY CORNELIUS RAYSOR
St. Matthews, S. C.
WILLIAM H. SCRUGGS
Andrews, N. C.
GERALD CLYDE SHULER
Address unknown (Not listed in '61 AMA)
WM. WALTER SIRAK
10300 Carnegie Ave., Cleveland 6, Ohio
HAMILTON J. SLUSHER
Rt. 4, Box 118, Fredericksburg, Va.
W. H. TOULSON
Medical Arts Bldg., Baltimore 1, Md.
CLEVELAND D. WIELCHEL
Box 213, Gainesville, Ga.

45th Year Reunion
Class of 1918
Captain: Wm. A. Darby, M.D.

LANG W. ANDERSON R.F.D. #1, Box 47, Williston, S. C.	BRODIE BANKS MCDADE 511 W. Davis St., Burlington, N. C.
JOHN BRYAN BONNER Aurora, N. C.	CLARENCE E. MACKE (Very ill, requested no mail)
SAMUEL ISADORE BROSS V.A. 1380 S. Sepulveda, Los Angeles, Calif.	ZACHARIAH MORGAN 10 E. Eager St., Baltimore 2, Md.
JOS. LUCIEN BROWN 314 Turrentine Ave., Gadsden, Ala.	JOHN M. NICKLAS 5701 Rusk Ave., Baltimore 15, Md.
EDWARD A. CAFRITZ 1835 Eye St., N.W., Washington, D. C.	MORRIS N. PUTTERMAN 4413 Springdale Ave., Baltimore 7, Md.
EDWARD JOS. M. CARLIN 1423 Irving St., Rahway, N. J.	IRWIN O. RIDGELY 202 Edgevale Rd., Baltimore 10, Md.
WILLIAM B. DALTON 421 N. Henderson Rd., Greensboro, N. C.	CHARLES W. ROBLES Lt. Comdr. USN (Ret.) R.D. 8, Tampa 4, Fla.
WILLIAM ARTHUR DARBY Medical Arts Bldg., Baltimore 1, Md.	JAMES PARKS ROUSSEAU 1014 W. 5th St., Winston-Salem, N. C.
WILLIAM B. DAVIDSON Rutland, Mass.*	FRANK SABISTON 115 E. Gordon St., Kinston, N. C.
RAMON C. DELIZ Address unknown (Not in '61 AMA)	JOSEPH SINDLER 829 Lake Drive, Apt. J2, Baltimore 17, Md.
OSCAR B. DIEBOLDER Address unknown (Not in '61 AMA)	ROBERT FRANKLING SLEDGE Lt. Comdr. (Ret.) 6115 Granby St., Norfolk 5, Va.
SHERMAN BALCH FORBES 706 Franklin St., Tampa 2, Fla.	THOMAS C. SPEAKE 512 Stevenson Lane, Towson 4, Md.
JOHN J. GIESEN Box 386—Sta. A, Radford, Va.	ALFRED NORTON SWEET 195 So. Main St., Middletown, Conn.
HARLEY MONROE JOHNSON West Columbia, S. C.	HENRY CLINTON WARLICK Address unknown
JAMES CRAIG JOYNER 718 Park Ave., New York 21, N. Y.	SAMUEL HOWARD WHITE R. Adm. USN (Ret.) York, S. C.
MARTIN FRANCIS KOCEVAR 403 S. 2nd St., Steelton, Pa.	

* Last known address.

40th Year Reunion
Class of 1923
Captain: Fred T. Kyper, M.D.

NATHANIEL M. BECK 2818 St. Paul St., Baltimore 10, Md.	FREDERICK B. DART Niantic, Conn.* (Not listed in '61 AMA)
JACOB BELENKY 1910 Arthur Ave., New York 57, N. Y.	JOSEPH DESANE 16-17 Parsons Blvd., Flushing 54, N. Y.
THADDEUS R. BOWERS, JR. 200 West St., Bristol, Tenn.	JOHN MILTON EDMONDS Ray, Arizona

ALUMNI ASSOCIATION SECTION

- THEODORE C. GRIFFIN
56 N. Main St., Keyser, W. Va.
- BEN M. GOLDBERG
1156 E. State St., Trenton, N. J.
- JOS. M. GUTOWSKI
433 Brace Ave., Perth Amboy, N. J.
- DOUGLASS ARNO HADDOCK
5700 Pontiac Trail, Orchard Lake, Mich.*
- ROBERT P. HAGERMAN
2924 Noyes Ave. S.E., Charleston 4, W. Va.
- J. ELMER HARP
Middletown, Md.
- PHILIP HIRSCH
50-14 Junction Blvd., Flushing, N. Y.
- JOHN T. HUNDLEY
701 Hollins St., Lynchburg, Va.
- WILLIAM C. JEANNETTE
103 E. Main St., Westminster, Md.
- GEORGE A. KNIPP
4116 Edmondson Ave., Baltimore 29, Md.
- ARTHUR MILTON KRAUT
2729 Boulevard, Jersey City 6, N. J.
- FREDERICK KYPER
827 Park Ave., Baltimore 1, Md.
- LEO ALOYSIUS LALLY
3517 Edmondson Ave., Baltimore 29, Md.
- W. S. LOVE, JR.
469 Natson Terrace, Pt. Charlotte, Fla.
- RALEIGH MILLER MOLER
19 So. Liberty St., Cumberland, Md.
- ROBERT L. MURRAY
Rafford, N. C.
- KARL JOHNSON MYERS
Philippi, W. Va.
- F. G. PRATIER
251 Tunnel Rd., Asheville, N. C.
- PAUL A. ROTHFUSS
21 W. 4th St., Williamsport, Pa.
- HARRY RUCHE
266 E. Flagler St., Miami 32, Fla.
- RICHARD SCHORR
5601 W. Olympic Blvd., Los Angeles 36, Calif.
- WALTER HAL SHEALY
Sharpsburg, Md.
- ROY G. SOWERS
130 S. Steele St., Sanford, N. C.
- PETER JOSEPH STEINCROHN
1430 Ancona Ave., Coral Gables 46, Fla.
- T. JOSEPH TOUHEY
441 S. Ellwood Ave., Baltimore 24, Md.
- WM. WALLACE WALKER
Medical Arts Bldg., Baltimore 1, Md.
- SIDNEY S. WASSERSTROM
247 A-36th Ave., San Mateo, Calif.*
- HENRY VINCENT WEINERT
28 Pleasant Ave., Passaic, N. J.
- WM. ARCHIBALD WELTON
221 Fairmont Ave., Fairmont, W. Va.*

* Last known address.

35th Year Reunion Class of 1928 Captain: J. J. Singer, M.D.

- CAPT. MARCEL R. BEDRI
Town & Country Motel, 5600 New Sepulpa Rd., Tulsa, Okla.
- WM. A. BERGER
160 Prospect St., East Orange, N. J.
- IRVING EZRA BLECHER
VA Hospital, Lyons, N. J.
- ETHEL BRANDFIELD
4177 Walnut St., Riverside, Calif.
- EARLE P. CLEMONS
5820 York Rd., Baltimore 12, Md.
- GEORGE ANDREW DUNCAN
Medical Tower Bldg., Norfolk, Va.
- BERNARD FRIEDMAN
617 Ocean Pkwy., Brooklyn 30, N. Y.
- JACQUES S. GILBERT
337 S. Beverly Dr., Beverly Hills, Calif.
- VICTOR GOLDBERG
1916 E. 30th St., Baltimore 18, Md.
- JEROME GOODMAN
809 Cathedral St., Baltimore 1, Md.
- CREED C. GREER
Goff Bldg., Clarksburg, W. Va.
- A. I. GROLLMAN
19 Garfield Place, Cincinnati 2, Ohio

BULLETIN OF THE SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

- LEWIS PERKINS GUNDRY
1014 St. Paul St., Baltimore 2, Md.
- SAMUEL HANKIN
1010 St. Paul St., Baltimore 2, Md.
- COL. PAUL HAYES
Fairmount Hosp., San Leandro, Calif.
- LEWIS JACOB HEROLD
801 Ocean Pkwy., Brooklyn 30, N. Y.
- H. ALVIN JONES
1107 St. Paul St., Baltimore 29, Md.
- ISRAEL KAUFMAN
3608 Bedford Ave., Brooklyn 10, N. Y.
- PHILIP LOUIS KAYE
3206 29th St., L. I. City, N. Y.
- THEODORE KOHN
3500 Kensington Ave., Richmond 21, Va.
- NATHAN HERSH KOTCH
1740 Ocean Ave., Brooklyn 30, N. Y.
- HERBERT H. LAMPERT
433 Avenue T, Brooklyn 23, N. Y.
- JACOB IRVING LAMSTEIN
3425 Knox Pl., New York 67, N. Y.
- JOSEPH G. LAUKAITIS
679 Washington Blvd., Baltimore 30, Md.
- MORRIS LERNER
75-44 Utopia Pkwy., Flushing, L. I., N. Y.
- MAURICE LEVINSKY
1425 Noble Ave., Bridgeport 10, Conn.
- LOUIS JACK LEVINSON
201 Lyons Ave., Newark, New Jersey
- EARL FREDERICK LIMBACH
30 Central Pk. So., New York 19, N. Y.
- EDW. ANDREW LITSINGER
202 Medical Arts Bldg., Charleston, W. Va.
- LUTHER EMMANUEL LITTLE
10 W. Madison St., Baltimore, Md.
- I. B. LYON
W. Md. Chronic Hosp., Hagerstown, Md.
- JOHN MACE
6 Church St., Cambridge, Md.
- ROBERT SADLER McCENEY
402 Main St., Laurel, Md.
- WILLIAM BUSTER McGEE
2290-6th Ave., San Diego, Calif.
- VINCENT MICHAEL MADDI
74 Front St., Binghamton, N. Y.
- AARON MEISTER
148-11 89th Ave., Jamaica, L. I., N. Y.
- DAVID MERKSAMER
105 Lincoln Rd., Brooklyn 25, N. Y.
- FRANK A. MERLINO
377 Hope St., Providence 6, R. I.
- VINCENT MICHAEL MESSINA
1403 S. Charles St., Baltimore 30, Md.
- RALPH MOSTWILL
1801 Eutaw Pl., Baltimore 17, Md.
- PASQUALE A. PIACENTINE
33-76 166th St., Flushing, L. I., N. Y.
- PETER PILEGGI
743 Washington Ave., Bridgeport, Conn.
- BENJ. SUNDERLAND RICH
Medical Arts Bldg., Baltimore 1, Md.
- CARL PAUL ROETLING
1326 W. Lombard St., Baltimore 23, Md.
- HYMAN S. RUBENSTEIN
2349 Eutaw Pl., Baltimore 17, Md.
- JOSEPH HOWARD RUTTER
114 S. Palmetto, Daytona Beach, Fla.
- MORRIS H. SAFFRON
292 Paulison Ave., Passaic, N. J.
- ROBERT S. SARDO
6015 York Rd., Baltimore 12, Md.
- CECIL CURRY SHAW
Loxley, Ala.
- ABRAHAM ALFRED SILVER
Temple Garden Apts., Baltimore 17, Md.
- JACK JEROME SINGER
117 W. 29th St., Baltimore 18, Md.
- MERRILL C. SMOOT
703 Oak Hill Ave., Hagerstown, Md.
- THEODORE E. STACY
207 Ridgemed Rd., Baltimore 10, Md.
- LEVI WADE TEMPLE, JR.
Lake View, S. C.
- WILLIAM HENRY VARNEY
120 Belvidere Ave., Washington, N. J.
- S. ZACKARY VOGEL
8733-95th St., Woodhaven, N. Y.
- FRED S. WEINTRAUB
1716 Carson St., Pittsburgh 3, Pa.
- NATHAN WEISENFELD
608 Blud Hill Ave., Hartford 5, Conn.
- FREDERICK S. WOLF
1611 USAF Dispensary (MATS)
McGuire AFB, N. J.
- MILTON WURZEL
2 Farley Ave. (Corner Avon Ave.)
Newark, N. J.
- CAPT. OSCAR D. YARBROUGH, MCUSA
Dir. Med. Bureau of Med and Surgery
Navy Dept., Washington 25, D. C.
- FREDERICK T. ZIMMERMAN
11 E. 68th St., New York 21, N. Y.

ALUMNI ASSOCIATION SECTION

30th Year Reunion

Class of 1933

Captain: Leon Kochman, M.D.

HAROLD H. AARON
251 Seaman Ave., New York 34, N. Y.

GEORGE S. BAKER
Neurological Surgery, Mayo Clinic
200 1st St. S.W., Rochester, Minn.

ALBERT EARL BARNHARDT
144 S. Main St., Kannapolis, N. C.

SAM BEANSTOCK
VA Hospital, Chillicothe, Ohio

MARTIN BECKER
76 Lowell Ave., West Orange, N. J.

DAVID E. BELLIN
86-15 Dongan Ave., Elmhurst 73, L. I., N. Y.

JOSEPH CECIL BERNSTEIN
Box 6034, West Palm Beach, Fla.

LOUIS BLITZMAN
211 East 18th St., New York 3, N. Y.

HARRY D. BOWMAN
318 N. Potomac St., Hagerstown, Md.

MEYER MARVIN COHEN
582 E. 25th St., Paterson 4, N. J.

RICHARD W. CONEGYS
Clayton, Del.

HAROLD CLAYTON DIEHL
39 W. Main St., Frostburg, Md.

VICTOR DRUCKER
Hamilton Ave. Hosp., Monticello, N. Y.

MEYER EMANUEL
VA Center, Togus, Maine

MANUEL ESPINOSA
170 Flamboyanes St., Rio Piedras, P. R.

MEYER GEORGE ETKIND
1546 Chapel St., New Haven 11, Conn.

JEROME FINEMAN
4004 Liberty Hgts. Ave., Baltimore 7, Md.

HASKELL WRIGHT FOX
Greeneville, Tenn.

FRANK A. FRANKLIN
256 S. Centre St., Orange, N. J.

RALPH BERNARD GARRISON
220 N. Main St., Hamlet, N. C.

ALEXANDER BLODNICK GOLDMAN
111 Van Buren St., Brooklyn 21, N. Y.

MEYER L. GOLDMAN
916 Cornaga Ave., Far Rockaway, N. Y.

JAMES STANLEY GORRELL
G M & S Hosp., VA Center, Los Angeles
25, Calif.

WILLIAM LEMUEL GRIGGS
Gate City, Va.

EARLE H. HARRIS
88-19 161st St., Jamaica 32, N. Y.

LOUTEN R. HEDGPETH
207 E. 14th St., Lumberton, N. C.

EARL W. HEMMINGER
Box 18, Elizabethtown, Pa.

GUSTAV HIGHSTEIN
3415 Clarks Lane, Baltimore 15, Md.

ALBERT J. HIMELFARB
3501 St. Paul St., Baltimore 18, Md.

WILLIAM ALONZO HOOVER
Murphy, N. C.

GEORGE HILLEL HURWITZ
99 Pratt St., Hartford 3, Conn.

JOSEPH JAY HYMAN
645 Ocean Ave., Brooklyn 26, N. Y.

MORRIS HYMAN
225 W. 86th St., New York 24, N. Y.

MYRON LEWIS KENLER
60-30 79th St., Elmhurst 73, N. Y.

ANN P. KENT
Kips Bay Yorkville Health Center,
411 E. 69th St., New York 21, N. Y.

LAURISTON L. KEOWN
431 E. Lake Ave., Baltimore 12, Md.

CHARLES KIMMEL
488 Broad St., Bloomfield, N. J.

LEON KOCHMAN
7945 Stevenson Rd., Pikesville 8, Md.

GEORGE ELLARD LENTZ
756 W. Market St., York, Pa.

BERNARD DANIEL LIFLAND
811 Stuyvesant Ave., Irvington, N. J.

MILTON E. LOWMAN
6502 Deancroft Rd., Baltimore 9, Md.

WALLACE HENRY MALAN
420 Le High Street, Lake City, Fla.

BENJAMIN MILLER
4469 Sedgwick St., N. W.,
Washington 16, D. C.

MEYER GEORGE MILLER
36 N. Main St., White River Jet., Vt.

JAMES IRVING MOORE
14 Seminole Ave., Baltimore 28, Md.

SIDNEY NOVENSTEIN
Funkstown, Md.

KERMIT E. OSSERMAN
4 E. 89th St., New York 28, N. Y.

GEORGE FOSTER PEER
407 N. Lincoln Ave., Odessa, Texas

JOSE T. PICO
Box 9924, Santurce, P. R.

NATHAN RACUSIN
6202 Park Hgts. Ave., Baltimore 15, Md.

DANIEL ROBERT ROBINSON
Area Medical Dir. Vet. Adm.
402 E. State St., Trenton, N. J.

DAVID H. ROSENFELD
900 17th St., N.W., Washington 6, D. C.

SAMUEL S. RUBIN
201 Patapsco Ave., Baltimore 6, Md.

HEDLEY ETHELBERT RUTLAND
1709 W. Market St., York, Pa.

THOMAS L. WOODFORD
Belington, W. Va.

ASA M. SCARBOROUGH
205 E. Avondale Dr., Greenville, S. C.

HYMEY SCHIFF
4023 Fallstaff Rd., Baltimore 15, Md.

JOSEPH SCHIFF
121 Chestnut St., Springfield 3, Mass.

BLANE M. SCHINDLER
43 Greene St., Cumberland, Md.

MAURICE HARRIS SCHNEIMAN
1220 Cottman Ave., Philadelphia 11, Pa.

GEORGE SCHOCHET
2448 Green St., San Francisco 23, Calif.

ALEC ROBERT SCHWARTZ
5801 Beacon St., Pittsburgh 17, Pa.

PAUL M. SCHWARTZ
33 S. Clinton St., Poughkeepsie, N. Y.

STEPHEN SEWELL
VA Hosp., Lyons, N. J.

GEORGE CLYDE SHINN
China Grove, N. C.

ASHBY WADE SMITH
13018 Georgia Ave., Silver Spring, Md.

HOWARD STACKHOUSE, JR.
1215 Walker Ave., Houston 5, Texas

MAURICE LEE STERN
68-09 Clyde St., Forest Hills 75, N. Y.

MARK THUMIN
57 S. Main St., Middletown, Conn.

LEONARD FRANCIS TURANO
194-18 117th Rd., St. Albans 12, N. Y.

JOHN LEE VAN METRE
311 S. George St., Charles Town, W. Va.

SAMUEL EASON WAY
Box 1175, Rocky Mount, N. C.

MICHAEL J. WIECIECH
707 S. Ann St., Baltimore 31, Md.

FRANK OLAF WOLBERT
200 N. Union Ave., Havre de Grace, Md.

BARNEY LELON WOODARD
Belington, W. Va.

25th Year Reunion

Class of 1938

**Co-Captains: Dr. John M. Scott, Dr. and Mrs. T. E. Woodward, and
Dr. Sidney Scherlis**

MILTON G. ABARBANEL
2515 S. State Rd., West Hollywood, Fla.

DANIEL J. ABRAMSON
1723 M St., N.W., Washington, D. C.

WILLARD APPLEFELD
5901 Park Hgts. Ave., Baltimore 15, Md.

MAX BAUM
7422 Eastern Ave., Baltimore 24, Md.

ROBERT ALEXANDER BONNER, JR.
43 Central Ave., Waterbury 2, Conn.

MELVIN BORDEN
5000 Balt. Nat'l. Pike, Baltimore 29, Md.

JOHN Z. BOWERS
University of Wisconsin School of Medicine
Madison, Wisc.

GERALDINE POWELL BRADLEY
622 W. 168th St., New York 32, N. Y.

ALUMNI ASSOCIATION SECTION

STANLEY E. BRADLEY
622 W. 168th St., New York 32, N. Y.

WILBUR S. BROOKS
312 Rugby Rd., Syracuse 6, N. Y.

MANUEL BROWN
1619 E. 15th St., Tulsa 20, Okla.

JOHN J. BUNTING
4705 Montrose Blvd., Houston, Tex.

BURTON CHANCE, JR.
8236 Germantown Ave., Phila. 18, Pa.

HILLIARD COHEN
4949 Rockhill Rd., Kansas City 10, Mo.

JOHN F. COOLAHAN
4201 Wilkens Ave., Baltimore 29, Md.

DONALD D. COOPER
100 Burke Ave., Towson 4, Md.

JAIME L. COSTAS-DURIEUX
Box 2004, Ponce, P. R.

ROBERT C. CRAWFORD
1224 Franklin Rd., S.W., Roanoke 14, Va.

MICHAEL J. DAUSCH
2421 Chesterfield Ave., Baltimore 13, Md.

WILLIAM ANTHONY DODD
6331 Belair Rd., Baltimore 6, Md.

VICTOR DOLFMAN
655 E. Allegheny Ave., Phila. 34, Pa.

ARNOLD H. EICHERT
1404 E. Broward Blvd.,
Ft. Lauderdale, Fla.

AARON FEDER
40-42 75th St., Jackson Hgts. 73, N. Y.

LESTER FOX
67 Ingalls Rd., Ft. Monroe, Va.

SAMUEL LOUIS FOX
1205 St. Paul St., Baltimore 2, Md.

LOUIS CALVIN GAREIS
101 W. Reed St., Baltimore 1, Md.

JOSEPH M. GEORGE, JR.
637 E. San Francisco, Las Vegas, Nev.

SAMUEL GERTMAN
3830 Alhambra Circle, Coral Gables, Fla.

HARRY GIBEL
35 Cloverfield Rd., S. Valley Stream, N. Y.

MILTON GINSBERG
3504 Erdman Ave., Baltimore 13, Md.

EDWARD LEWIS GLASSMAN
4037 Falls Rd., Baltimore 11, Md.

LOUIS E. GOODMAN, JR.
1211 Eutaw Pl., Baltimore 17, Md.

SYLVAN C. GOODMAN
1801 Eutaw Pl., Baltimore 17, Md.

FLORENCE HARRIS GOTTDIENER
16 Garfield Pl., Poughkeepsie, N. Y.

SIDNEY R. GOVONS
408 N. Capitol, Lansing 33, Mich.

FREDERICK LEWIS GRAFF
116 W. Washington St., Hagerstown, Md.

WILLIAM LEHMAN GUYTON, JR.
130 W. Main St., Waynesboro, Pa.

J. HENRY HAASE
2926 E. Cold Spring Lane, Baltimore 14, Md.

SIDNEY HARRIS
7257 Owensmouth Ave., Canoga Pk., Calif.

MARY L. HAYLECK
Marylander Apts., Baltimore 18, Md.

JOHN RALPH HORKY
Churchville, Md.

FRANCIS JOS. JANUSZESKI
The Allentown Hosp. Assn., Dept. of Path.,
Allentown, Pa.

J. S. KALTER
18 E. 62nd St., New York 21, N. Y.

HARRY KELMENSEN
2 E. Reed St., Baltimore 2, Md.

JOHN J. KNOX
39 York St., Gettysburg, Pa.

GERALD I. KURTZ
306 Broadway, Paterson, N. J.

MILTON LAYDEN
Wynnewood Towers, 100 W. Cold Spring
Lane, Baltimore 10, Md.

LUTHER A. LENKER
2880 Sunset Dr., Camp Hill, Pa.

MORTON HIRSCH LIPSITZ
860 W. Ferry St., Buffalo 2, N. Y.

HILTON LUIS LOPEZ
Box 7128 BoObrero, Santurce, P. R.

WILLIAM R. LUMPKIN
618 Valley Lane, Towson 4, Md.

ERNEST MICHAELSON
341 Mineola Blvd., Mineola, L. I., N. Y.

ARTHUR V. MILHOLLAND
1221 Valley, Baltimore 2, Md.

CLARENCE LEE MILLER
1465 Rhode Island Ave., N.W.,
Washington 5, D. C.

ROYSTON MILLER
1141 Delaney St., Orlando, Fla.

JAMES HAIGHT MINISZEK
13 Oak St., Brattleboro, Vt.

- SAMUEL NOVEY
11 E. Chase St., Baltimore 2, Md.
- LAURENCE CALDWELL POST
6805 York Rd., Towson 4, Md.
- COL. JOHN RIZZOLO
USAF Hospital Clark, APO 74,
San Francisco, Calif.
- PAUL W. ROMAN
11 E. Chase St., Baltimore 2, Md.
- JUAN ANTONIO ROSSELLO
U. of P. R., School of Medicine,
San Juan 22, P. R.
- HENRY ROTHKOPF
6231 Old York Rd., Philadelphia, Pa.
- ARAM M. SARAJIAN
111 W. Forest Dr., West Englewood,
Teaneck, N. J.
- JOHN FERDINAND SCHAEFER
401 Random Rd., Baltimore 29, Md.
- SIDNEY SCHERLIS
11 E. Chase St., Baltimore 2, Md.
- ROBERT A. SCHLESINGER
VA Hospital, Philadelphia 4, Pa.
- JOHN MATTHAI SCOTT
600 W. Belvedere Ave., Baltimore 10, Md.
- CHARLES V. SEVCIK
803 W. Joppa Rd., Towson 4, Md.
- ROBERT C. SHEPPARD
311 Montrose Ave., Baltimore 28, Md.
- EDWARD SIEGEL
61 Brinkerhoff St., Plattsburg, N. Y.
- DONALD J. SILBERMAN
1815 11th Ave. S., Birmingham 5, Ala.
- MAURICE JACOB SMALL
VA Hosp., East Orange, N. J.
- JOHN P. SMITH
Loch Raven Blvd. & Northern Pkwy.,
Baltimore 12, Md.
- EMANUEL SPRIE
85-04 168th St., Jamaica 3, N. Y.
- AARON STEIN
1140 5th Ave., New York 28, N. Y.
- MORRIS W. STEINBERG
3913 Hollins Ferry Rd., Baltimore 27, Md.
- ADAM G. SWISS
505 Worcester Rd., Towson 4, Md.
- BERNARD OSCAR THOMAS, JR.
228 N. Market St., Frederick, Md.
- JAMES UPSHUR THOMPSON
6 Locust St., Cambridge, Md.
- WINFIELD LYNN THOMPSON
809 Simmons St., Goldsboro, N. C.
- FREDERICK J. VOLLMER
311 Gittings Ave., Baltimore 12, Md.
- JOHN ALFRED WAGNER
115 Overhill Rd., Baltimore 10, Md.
- HERBERT L. WARRES
3314 Fallstaff Rd., Baltimore 15, Md.
- JOHN EDWARD WAY
Beaufort, N. C.
- ALVAN ABRAM WELFELD
1801 Eutaw Place, Baltimore 17, Md.
- HARRY F. WHITE, JR.
Spreckels, Calif.
- S. COTTRELL WHITE
Box 4611, Carmel-by-the-Sea, Calif.
- ALBERT WINER
3000 Connecticut, N.W., Washington 8, D. C.
- CELESTE LAUVE WOODWARD
1 Merrymount Rd., Baltimore 18, Md.
- THEODORE ENGLAR WOODWARD
1 Merrymount Rd., Baltimore 18, Md.
- RICHARD W. WORTHINGTON, JR.
724 Emerald Bay, Laguna Beach, Calif.

20th Year Reunion March Class of 1943

- ALBERTO ADAM
360 Warren Rd., Wayne, Pa.
- MARCUS L. ADERHOLDT, JR.
624 Quaker La., High Point, N. C.
- RAMON I. ALMODOVAR
1913 Fernandez Junco Ave., Santurce, P. R.
- EMORY F. BAKER
205 W. Indiana Ave., Spokane 17, Wash.
- JOHN DAVID BARNES
34 Court St., New Bedford, Mass.
- JAMES BIZZELL
804 Park Ave., Goldsboro, N. C.

ALUMNI ASSOCIATION SECTION

- CHARLES BOWEN
925 2nd Nat'l Bank, Akron 8, Ohio
- THOMAS J. BRENNAN
5217 Harford Rd., Baltimore 14, Md.
- RICHARD C. ALLSOPP
246 Van Buren St., Evans City, Pa.
- ROBERT Z. BERRY
Medical Arts Bldg., Baltimore 1, Md.
- RALPH K. BROOKS
U. S. Naval Hospital, Jacksonville, Fla.
- ROSS C. BROOKS
6503 York Rd., Baltimore 12, Md.
- WILLIAM J. BRYSON
4605 Edmondson Ave., Baltimore 29, Md.
- HARRY COHEN
3308 Olympia Ave., Baltimore 15, Md.
- DONALD LAWRENCE COURTNEY
Reedspport, Ore.
- PHILIP CRASTNOPOL
1221 E. 21st St., Brooklyn 30, N. Y.
- BENEDICT CUSANI
628 Alfred I. duPont Bldg., Miami 32 Fla.
- MIGUEL S. DALMAU
1435 Wilson Ave., Santurce, P. R.
- WILLIAM J. G. DAVIS
1532 K St., N.W., Washington 6, D. C.
- JOHN DANIEL DIORIO, JR.
2433 Campbell Ave., Schenectady 6, N. Y.
- MARTA E. SOLER DIORIO
2433 Campbell Ave., Schenectady 6, N. Y.
- THOMAS B. DUNNE
Surg. Gen. Office, USA,
Washington 25, D. C.
- WILLIAM R. EATON
300 Hampton Rd., Pittsburgh 15, Pa.
- JOHN W. W. EPPERSON
Mayfair Sq., Owensboro, Ky.
- RICHARD L. FOWLER
6 Lincoln St., Spencer, Mass.
- SAMUEL L. FRENCH
129 S. 5th St., Paducah, Ky.
- ALFRED GARRISON
2 E. Read St., Baltimore 2, Md.
- ANTHONY R. GIGLIA
36 E. 8th St., Newport, Ky.
- RAYMOND GOLDBERG
701 Cathedral St., Baltimore 1, Md.
- JOSE GRAVE DE PERALTA
Independencia 305, Camaguey, Cuba
- DAVID B. GRAY
205 Bradford St., Charleston 1, W. Va.
- WILLIAM B. HAGAN
3303 Perry St., Mt. Rainier, Md.
- F. STANLEY HASSLER, III
4602 Bedford Blvd., Forest Hills Park,
Wilmington, Del.
- ALVIN H. HONIGMAN
2216 Worley Dr., Alexandria, La.
- JANE FOLEY HUEVER
370 Common St., Belmont 78, Mass.
- WILLIAM J. HUNT
136 Church St., High Point, N. C.
- ROBERT F. KEADLE
318 N. Potomac St., Hagerstown, Md.
- CHARLES ALEXANDER KEMPER
119½ N. Bridge St., Chippewa Falls, Wisc.
- ROBERT CHARLES LAMAR, JR.
104 Bay St., Snow Hill, Md.
- FERDINAND WAYNE LEE
225 Hawthorne La., Charlotte, 4, N. C.
- RICHARD Q. LEWIS
3611 21st Street, Lubbock, Tex.
- ROBERT CHARLES LIVINGSTONE
121 N. Adams St., Petersburg, Va.
- PAUL G. LUKATS
524 Park Ave., Barberton, Ohio
- CHARLES R. MACDONALD
P. O. Box 518, Glen Burnie, Md.
- JOSEPH C. MATCHAR
6821 Reisterstown Rd., Baltimore 15, Md.
- MARCY E. McMILLAN, JR.
30241 S.W. 171st Ave., Homestead, Fla.
- NESTOR H. MENDEZ
700 Roosevelt St., Santurce, P. R.
- JAMES DELMAR MILLER
2218 Market St., Youngstown 7, Ohio
- ROBERT V. MINERVINI
330 Park Hill Ave., Yonkers, N. Y.
- JOHN DAVID MORRIS
2 W. University Pkwy., Baltimore 18, Md.
- HENRY MUSNICK
1419 Beacon St., Brookline 46, Mass.
- JOSEPH CARL MYERS
1401 E. Cold Spring Lane, Baltimore 12, Md.
- KENNETH POWELL NASII
2900 E. Del Mar Blvd., Pasadena, Calif.
- CHARLES A. NEFF
1521 Martin St., Porterville, Calif.
- MARIA A. PARES
Box 1766, San Juan, P. R.

BULLETIN OF THE SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

- FRANK S. PARROTT
911 W. Henderson St., Salisbury, N. C.
- ENRIQUE PEREZ-SANTIAGO
730 Ponce de Leon Ave., Hato Rey, P. R.
- HENRY B. PERRY, JR.
208 Homewood, Greensboro, N. C.
- PRESTON H. PETERSEN
1045 N. California St., Stockton 3, Calif.
- SAMUEL RONALD PINES
2 E. Read St., Baltimore 2, Md.
- J. EMMETT QUEEN
115 West Lake Ave., Baltimore 10, Md.
- RAYMOND V. RANGLE
2938 St. Paul St., Baltimore 18, Md.
- H. RELLINGER-STAFFORD
Duncanville, Pa.
- JOSEPHINE RENSHAW
1150 Connecticut Ave., N.W.,
Washington 6, D. C.
- GRANVILLE HAMPTON RICHARDS, JR.
Port Deposit, Md.
- MARTIN A. ROBBINS
Esplanade Apts., Baltimore 17, Md.
- N. CROMWELL ROSSTON
Casebeer Clinic Bldg., 10 S. Idaho St.,
Butte, Mont.
- EARL L. ROYER
407 Camden Ave., Salisbury, Md.
- RICHARD S. RUDE
244 W. Main St., Moorestown, N. J.
- SEYMOUR SACKS
101 Garden St., Needham 92, Mass.
- IRVING L. SAMUELS
140 Lockwood Ave., New Rochelle, N. Y.
- NATHANIEL SHARP
1801 Eutaw Place, Baltimore 17, Md.
- JOHN W. SIGLER
2799 W. Grand Blvd., Detroit 2, Mich.
- ANDREW A. SPIER
1501 Pentridge Rd., Baltimore 12, Md.
- EDWIN H. STEWART, JR.
Medical Arts Bldg., Baltimore 1, Md.
- HOWARD W. STIER
129 Prospect St., Passaic, N. J.
- JAMES E. STONER, JR.
Walkersville, Md.
- IRVING J. TAYLOR
Taylor Manor Hosp., Ellicott City, Md.
- JOSE M. TORRES-GOMEZ
611 Olimpo St. Miramar, San Juan, P. R.
- CHARLES WELDON TRADER
302 Market St., Pocomoke City, Md.
- ROBERT B. TUNNEY
7215 York Rd., Baltimore 12, Md.
- STEPHEN J. VAN LILL
3601 Greenway, Baltimore 18, Md.
- JOSEPH G. VARHOL
1122 Van Houten Ave., Clifton, N. J.
- IRVIN L. WACHSMAN
407 S. Union Ave., Havre de Grace, Md.
- SAMUEL HAYWOOD WALKER
32 Wall St., Asheville, N. C.
- FRANK ORVILLE WARREN, JR.
40 W. Brook St., Manchester, N. H.
- THOMAS C. WEBSTER
2938 St. Paul St., Baltimore 18, Md.
- MAURICE RICHARD WEISS
124 S. Lasky Dr., Beverly Hills, Calif.
- J. CARLTON WICH
614 Coventry Road, Baltimore 4, Md.
- OLIVER WAYNE WILLIAMSON
Wagener, S. C.
- THOMAS L. WILSON
316 W. State St., Jacksonville, Ill.
- ARTHUR OVERTON WOODY
Box 214, La Plata, Md.
- DAVID K. WORGAN
509 Olive Way, Seattle 1, Wash.
- LEONARD EMORY YORKO
3441 West Street, Weirton, W. Va.

December Class of 1943

- ELIZABETH ACTON
800 Cathedral St., Baltimore 1, Md.
- RUTH W. BALDWIN
University Hosp., Baltimore 1, Md.
- WILLIAM R. BALLARD, JR.
8115 So. Vermont Ave.,
Los Angeles 44, Calif.
- LILLIAN F. BENNETT
2299 19th Ave., San Francisco 16, Calif.
- HERBERT L. BERRY
1208 S. Garfield Ave., Alhambra, Calif.
- JOSEPH WM. BITSACK
461 Saddle River Rd., Rochelle Pk., N. J.
- FREDERICK B. BRANDT
1726 Eye St., Washington 6, D. C.
- SHERMAN S. BRINTON
508 E. South Temple St.,
Salt Lake City 2, Utah
- HENRY T. BROBST
213 Professional Bldg., Roanoke, Va.
- CHARLES WM. BROWN
1830 Williams St., Denver 18, Colo.
- JAMES MACK BROWN
1014 Myrtlewood Dr., Tuscaloosa, Ala.
- ERNESTO J. COLON-YORDAN
Hosp. Santo Asilo de Damas, Ponce, P. R.
- E. ELLSWORTH COOK, JR.
11 McKim Ave., Baltimore 12, Md.
- WM. N. CORPENING
Box 200, Granite Falls, N. C.
- ROBERT M. N. CROSBY
1202 St. Paul St., Baltimore 2, Md.
- ROBERT KIMBER CURTISS
117 E. Genesee St., Syracuse, N. Y.
- ALFRED H. DANN
2720 Capital Ave., Sacramento 16, Calif.
- EDWARD C. DAY
6318 Willston Dr., Falls Church, Va.
- HAROLD DILLON
1832 Spruce St., Philadelphia 3, Pa.
- HAMILTON P. DORMAN
1302 18th St., N.W., Washington 6, D. C.
- JOHN J. DOYLE
82 Court St., Portsmouth, N. H.
- DANIEL EHRLICH
6619 Chelwood Rd., Baltimore 9, Md.
- HENRY G. FERRI
32 E. Main St., Carnegie, Pa.
- AARON FINEGOLD
5222 Butler St., Pittsburgh, Pa.
- MARY JANE FOLEY
115 S. 4th St., Clarksburg, W. Va.
- AUGUSTUS H. FRYE, JR.
315 Provident Bldg., Chattanooga 2, Tenn.
- ELI GALITZ
1025 E. 25th St., Hialeah, Fla.
- RICHARD M. GARRETT
14 Catoma St., Montgomery 4, Ala.
- ALBERT GUBNITSKY
5415 Park Hgts. Ave., Baltimore 15, Md.
- JOSEPH ROY GUYTHER
Mechanicsville, Md.
- WILLIAM MYRICK HARRIS
Lonaconing, Md.
- JOHN HAUGHT
3303 Perry St., Mt. Rainier, Md.
- FRANCIS E. HORN BROOK
8911 LaMesa Blvd., La Mesa, Calif.
- MANUEL A. IGUINA-JIMENEZ
Hosp. Auxilio Mutuo, Hato Rey, P. R.
- GABRIEL INGENITO
840 Howard Ave., New Haven 11, Conn.
- C. HA. INGRAM
624 Quaker Lane, High Point, N. C.
- LUTS M. ISALES
P. O. Box 7, Roosevelt, P. R.
- MELVIN JOSEPH JAWORSKI
2711 Eastern Ave., Baltimore 13, Md.
- DAN FRANK KEENEY
1418 Webster St., Washington 11, D. C.
- CHARLES ALEXANDER KEMPER
119½ N. Bridge St., Chippewa Falls, Wisc.
- ISHMAEL WORTH KIRBY
King, N. C.
- ALLEN KLEIMAN
1115 No. Calvert St., Baltimore 2, Md.
- CLARENCE V. LATIMER, JR.
20 Elm St., Hudson Falls, N. Y.
- FREDERICK W. LURTING
811 Main St., Big Spring, Tex.
- PETER MAMULA
15305 So. Atlantic, Compton, Calif.
- ARNOLD ROBERT MARKS
Suite 600 Prunty Bldg., Clarksburg, W. Va.
- LLOYD L. McCORMACK
Fremont, Ind.

BULLETIN OF THE SCHOOL OF MEDICINE, UNIVERSITY OF MARYLAND

- ROBERT B. MCFADDEN
Latrobe Bldg., Baltimore 2, Md.
- WILLIAM E. MCGRATH
1303 Frederick Rd., Baltimore 28, Md.
- JOSEPH F. McMULLEN
754 Eathan Ave., Pittsburgh 26, Pa.
- DEVÖE K. MEADE
1015 E. Main St., Turlock, Calif.
- JAMES D. MILLER
3121 Logan Rd., Youngstown, Ohio
- ANGEL N. MIRANDA-RIVERA
129 E. 69th St., New York 21, N. Y.
- JACK C. MORGAN
1120 Locust Ave., Fairmont, W. Va.
- MYRON J. MYERS
2500 Eutaw Pl., Baltimore 17, Md.
- ALFRED NELSON
1903 Indian Head Rd., Towson 4, Md.
- I. FLOYD NESBITT
2016 Sunset Ave., Durham, N. C.
- JOHN C. OZAZEWSKI
6305 Pinchurst Rd., Baltimore 12, Md.
- JOHN M. PALESE
738 S. Conkling St., Baltimore 24, Md.
- ROBERT JOSEPH PETERS
Masontown, Pa.
- E. THORNTON PFEIL
2021 N. Central Ave., Phoenix, Ariz.
- SAMUEL RONALD PINES
2 E. Read St., Baltimore 2, Md.
- WM. HENRY POMEROY, II
1852 Poquonock Ave., Poquonock, Conn.
- F. L. RAFFUCCI-ARCE
School of Tropical Med., San Juan, P. R.
- JAMES J. RANGE
Box 324, Johnson City, Tenn.
- CLIFF RATLIFF, JR.
4605 Edmondson Ave., Baltimore 29, Md.
- NORMAN B. REAM
218 E. 10th St., Tyrone, Pa.
- JOHN MUNN RECHT
77 Park Ave., New York 16, N. Y.
- ARTHUR M. RINEHART
1532 Havenwood Rd., Baltimore 18, Md.
- MERRITT EZEKIEL ROBERTSON
New Windsor, Md.
- GEORGE CARRAWAY ROGERS
7 Catawba St., Spartansburg, S. C.
- WILLIAM BRANNON ROGERS, JR.
1935 Second St., Cuyahoga Falls, Ohio
- STEVENSON PARKER SANTIAGO
Naval Hosp., San Diego, Calif.
- ROCCO LUIS SAPARETO
38 Saltonstall Rd., Haverhill, Mass.
- IRVING SCHERLIS
2 E. Read St., Baltimore 2, Md.
- FRANK MOLLMAN SHIPLEY
Rt. 2—Box 116, Annapolis, Md.
- JAMES S. SHORTLE
801 Encino Pl., N.E., Albuquerque, N. Mex.
- FRANK MASON SONES
2050 E. 93rd St., Cleveland, Ohio
- JOHN THOMAS STEGALL
132 N. Tradd St., Statesville, N. C.
- HAROLD STERLING
2100 Connecticut Ave., Washington 8, D. C.
- MARTIN EDWARD STROBEL
48 Main St., Reisterstown, Md.
- GLENN D. SUMMERLIN
903 S.W. 4th Ave., Gainesville, Fla.
- TALMADGE STANLEY THOMPSON
Box 224, Venice, Fla.
- DHARMA LUZ VARGAS
Ave. Gonzales 1106, Río Piedras, P. R.
- GRAYSON S. WALDROP
2115 Clark Ave., Raleigh, N. C.
- HARRY ERNEST WALKUP
44 Summit Place, Haworth, N. J.
- GEORGE BROOKS WEST, JR.
9 Race St., Cambridge, Md.
- DAVID REID WILL
3619 Lochearn Dr., Baltimore 7, Md.
- THOMAS R. WILLIAMS, JR.
25 9th Avenue, N.E., Hickory, N. C.
- PAUL RANDALL ZIEGLAR
3723 Edmondson Ave., Baltimore 29, Md.

ALUMNI ASSOCIATION SECTION

15th Year Reunion

Class of 1948

Captain: Fred R. McCrumb

- ANDREW ALECCE
1123 St. Paul St., Baltimore 2, Md.
- GEORGE M. ALLISON
126 W. Nopal St., Uvalde, Tex.
- JOSEPH L. APONTE
Mayaquez #26, Hato Rey, P. R.
- DAVID AULD
AFB Hosp., Lackland, Tex.
- FRANK W. BAKER, JR.
2016 Dumont Rd., Timonium, Md.
- DAVID H. BEYER
Aero Med Space Center, Brooks AFB, Tex.
- JAMES BISANAR
501 Sussex Rd., Towson 4, Md.
- DONALD B. BOND
103 Hanover Rd., Reisterstown, Md.
- EUGENE L. BRONSTEIN
8449 164th St., Jamaica, L. I. 2, N. Y.
- JOHN M. BUCHNESS
USPHS Hosp., Stapleton 4,
Staten Island, N. Y.
- JOHN B. BULLOCK
2019 Monument Ave., Richmond 20, Va.
- MATT H. BULLUCK
Brooke Gen. Hosp., San Antonio, Tex.
- ROBERT CHAMOVITZ
6641 Rosemoor St., Pittsburgh 17, Pa.
- ALICE GRAYBILL CHELTON
145 LeBrun Rd., N.W., Atlanta 5, Ga.
- HAROLD JAMES CRECRAFT
2109 Hayes St., Nashville 5, Tenn.
- JAMES B. DALTON, JR.
4203 Kingchrest Pkwy., Richmond 19, Va.
- RAYMOND J. DEMPSEY
86 W. Jefferson St., Joliet, Ill.
- FRANK P. DWYER, JR.
The Latrobe Bldg.,
Chas. and Read Sts., Baltimore 2, Md.
- ROBERT E. ENSOR
206 W. Penna. Ave., Baltimore 4, Md.
- LEONARD H. GOLOMBEK
7039 Liberty Rd., Baltimore 7, Md.
- BOWIE L. GRANT
77 Third St., Oakland, Md.
- JAMES W. GREEN
1005 Harrisburg Pike, Moanted Route,
Carlisle, Pa.
- GEORGE V. HAMRICK
844 Lower Chester Rd., Charleston, W. Va.
- JOHN R. HANKINS
Mt. Wilson St. Hosp., Mt. Wilson, Md.
- FREDERICK J. HELDRICH
801 Toll House Rd., Frederick, Md.
- FLORENCE KUNST HOBACK
910 4th Ave., Huntington 1, W. Va.
- RICHARD HOBART
Fountain City, Tenn.
- WILLIAM J. HOLLOWAY
1306 N. Broom St., Wilmington 6, Del.
- MARION C. INSLEY, JR.
1117 No. Second St., Harrisburg, Pa.
- LEE NORMAN KASTNER
715 London Ave., Portsmouth, Va.
- RAYMOND H. KAUFMAN
6613A Travis, Houston, Tex.
- KATHERINE V. KEMP
722 Stamford Rd., Baltimore 29, Md.
- CARL H. KENNEDY, JR.
1503 Foulkrod St., Philadelphia 24, Pa.
- STEPHEN C. LEOGRANDIS
601 Georgina, Santa Monica, Calif.
- CHARLES H. LITHGOW
USPHS Hosp., Baltimore 11, Md.
- H. PATTERSON MACK
Christ Hosp., Cincinnati 19, Ohio
- NICHOLAS MALLIS
2 East Read St., Baltimore 2, Md.
- BURTON V. MATTHEWS
13724 W. Fort St., Wyandotte, Mich.
- ROLAND D. MATTHEWS,
1610 Vaughn Rd., Burlington, N. C.
- ELIZABETH J. McCAULEY
423 Daniels St., Raleigh, N. C.
- FRED R. MCCRUMB, JR.
1426 Forest Park Ave., Baltimore 7, Md.
- DONALD I. MOHLER
975 Ryland St., Reno, Nev.
- EDWARD ALPHONSO NEWELL
3207 Turtle Dr., Dallas 19, Tex.

- G. DONALD NISWANDER
105 Pleasant St., Concord, N. H.
- STEPHEN K. PADUSSIS
1309 Glendale Rd., Baltimore 12, Md.
- PAUL VERNON NOLAN
E. I. Du Pont de Nemours,
Chattanooga, Tenn.
- J. JAY PLATT
434 Eastern Ave., Baltimore 21, Md.
- ALBERT M. POWELL, JR.
801 Toll House Ave., Frederick, Md.
- JOSEPH S. REDDING
1706 South Road, Baltimore 9, Md.
- JAS. L. RHYNE
Balto. City Health Dept., Baltimore, Md.
- EDSEL A. RODRIGUEZ
Elysburg, Pa.
- ROBERT LEE RUDOLPH
901 Third St., Marietta, Ohio
- MERLE S. SCHERR
803 Atlas Bldg., Charleston, W. Va.
- BENSON SCHWARTZ
3601 Woodvalley Dr., Baltimore 8, Md.
- JOHN R. SHELL
The Street Clinic, Vicksburg, Miss.
- BENJAMIN K. SILVERMAN
253 Witherspoon St., Princeton, N. J.
- DANIEL L. SILVERSTEIN
2304 Wichita Ave., Baltimore 15, Md.*
- T. C. SIWINSKI
706 Shelley Road, Baltimore 4, Md.
- RENNERT M. SMELSER
11 E. Chase St., Baltimore 2, Md.
- WM. A. SNYDER
U.S.N. Hosp., Memphis, Tenn.
- ROBERT R. STAHL
7441 W. Ridgewood Dr., Parma 29, Ohio
- DANIEL LEWIS STONE
1680 Meridian Ave., Miami Beach 39, Fla.
- KYLE Y. SWISHER, JR.
151 Ligon Rd., Ellicott City, Md.
- NORMAN TARR
USPHS Hospital, Baltimore 11, Md.
- ALLEN D. TATE, JR.
1610 Vaughn Rd., Burlington, N. C.
- FRANK J. THEUERKAUF, JR.
864 Main St., Conneaut, Ohio
- WILLIAM G. THUSS, JR.
2124 4th Ave. So., Birmingham, Ala.
- PHYLLIS PETERSEN VAUGHN
5965 Ponce de Leon Blvd., Coral Gables, Fla.
- HEZEKIAH G. WALTERS, JR.
Whiteville, N. C.
- CHARLES I. WARE
2 Jackson Ave., Northfield, N. J.
- ROGER S. WATERMAN
24 Sheraton Rd., Randallstown, Md.
- JAMES T. WELBORN
17 E. 2nd Ave., Lexington, N. C.
- CLARK WHITEHORN
P. O. Box 12218 Cove Station,
Panama City, Fla.
- JOHN DEAN WILSON
135 N. Potomac St., Hagerstown, Md.
- ROBERT WISE
155 Cliff Rd., Wellsley Hills, Mass.
- WILLIAM S. WOMACK
706 Camden Ave., Salisbury, Md.
- JOHN P. YOUNG
Medical Center Bldg.,
85 Victoria Rd., Asheville, N. C.

* Last known address.

10th Year Reunion
Class of 1953
Captain: Robert T. Singleton, M.D.

- LOUIS CROFT ARP, JR.
1409 6th Ave., Moline, Ill.
- RICHARD M. BALDWIN
Parkland Mem. Hosp., Dallas 19, Tex.
- JAMES LEROY BANKS, JR.
Williamston, S. C.
- GRACE A. BASTIAN
2271 Bryn Mawr Ave., Bryn Mawr, Penna.
- GEORGE H. BECK
2102 Woodbourne Ave., Baltimore 14, Md.
- SCOTT B. BERKELEY, JR.
712 Simmons St., Goldsboro, N. C.

ALUMNI ASSOCIATION SECTION

- ROBERT BERKOW
1351 Mt. Hope Ave., Rochester 20, N. Y.
- SAMUEL BLUMENFELD
2506 Rellim Rd., Baltimore 9, Md.
- JAMES E. BOGGS
5105 Kanawha Ave., S.E.,
Charleston, W. Va.
- JOSEPH R. BOVE
789 Howard Ave., New Haven 4, Conn.
- GEORGE R. BRINKLEY
Med. Center, Frederick, Md.
- D. E. BULLUCK, JR.
422 Lippincott St., Riverton, N. J.
- THOMAS J. BURKHART
York Hospital, York, Pa.
- WALTER H. BYERLY
224 Taylor St., Sterling, Colo.
- BERNARD JOSEPH BYRNES, JR.
4112 Erdman Ave., Baltimore 13, Md.
- CHARLES F. CARROLL, JR.
Cabarrus Mem. Hosp., Concord, N. C.
- DONALD SWEETSER CARTER
714 York Rd., Towson 4, Md.
- JOHN V. CLIFT
Medical Arts Bldg., Baltimore 1, Md.
- JOHN B. CODINGTON
2715 Columbia Ave., Wilmington, N. C.
- JEROME COHEN
1900 S. Atlantic Blvd., Monterey Pk.,
Los Angeles, Calif.
- SALOMON COLON-LUGO
1104 Brambaugh St., Rio Piedras, P. R.
- WYAND F. DOERNER, JR.
414 N. Mechanic St., Cumberland, Md.
- R. JUDSON DOWELL
127 E. 18th St., Antioch, Calif.
- JOHN D. DUMLER
Medical Arts Bldg., Baltimore 1, Md.
- JULES B. EDLOW
8508-16th St., Silver Spring, Md.
- HARRY L. EYE
Franklin, W. Va.
- HUGH FIROR
903 Ranch Rd., Boise, Idaho
- LEONARD H. FLAX
1202 St. Paul St., Baltimore 2, Md.
- SYLVAN FRIEMAN
1800 N. Charles St., Baltimore 1, Md.
- FREDERICK A. GARLOCK
3504 Broadway, Great Bend, Kansas
- JOSEPH S. GARRISON, LT. MC USN
Naval Hosp., Bethesda, Md.
- GEORGE GEVAS
1100 Market St., Parkersburg, W. Va.
- JOSEPH P. GILLOTTE
Box 1583, Terre Haute, Ind.
- LEONARD B. GLICK
Present address unknown
- JOHN McMASTER HARTMAN
Brooks Medical Bldg., 1200 Quarrier,
Charleston, W. Va.
- JOHN W. HEISSE, JR.
96 Colchester Ave., Burlington, Vt.
- KENNETH C. HENSON
825 S. Potomac St., Hagerstown, Md.
- THOMAS F. HERBERT
46 Church Road, Ellicott City, Md.
- CHARLES F. HESS
Smithburg, Md.
- GEORGE OVERTON HIMMELWRIGHT
133 Virginia Ave., Cumberland, Md.
- WILLIAM LEWIS HOLDER
408 Bayview Bldg., Ft. Lauderdale, Fla.
- EARL STUART HUNTLEY, JR.
623 Seybold Bldg., Miami 32, Fla.
- HENRY A. JONES, JR.
Univ. Calif. Med. Center,
Los Angeles 24, Calif.
- THOMAS L. JONES
President Apts., Cincinnati 29, Ohio
- WALTER F. JUDGE
Jersey City Hosp., Jersey City 4, N. J.
- WERNER E. KAESE
1822 17th St., N.W., Rochester, Minn.
- WILLIAM NICHOLAS KARN, JR.
Wyoming St. Hosp., Evanston, Wyo.
- ROBERT KINGSBURY
834 W. Locust St., Seaford, Del.
- WILLIAM S. KISER
4642 Northwood Dr., Baltimore 12, Md.
- ARTHUR CLYDE KNIGHT
R.D. #1, Deer Lodge, Mont.
- ROBERT YOUNG LAMBERT
3408 Shallowford Rd., Chamblee, Ga.
- HARRISON MORTON LANGRALL, JR.
Davis Clinic, Marian, Ind.
- BENJAMIN LEE
1205 Ten Oaks Rd., Baltimore 27, Md.
- HERBERT H. LEIGHTON, CAPT., MC USA
77 Oak St., Oakland, Md.
- ROBERT LEE LEVINE
4009 Pinkney Rd., Baltimore 15, Md.

- RAFAEL LONGO-CORDERO
Box 488, Roosevelt, P. R.
- GORDON E. MADGE
1200 E. Broad St., Richmond 19, Va.
- JESSE W. MCCrackEN
108 E. Northwood St., Greensboro, N. C.
- A. WEEMS McFADDEN
USA Hosp., Ft. Jackson, Columbia, S. C.
- RONALD E. MENDELSON
St. Thomas, Virgin Islands
- JOHN W. METCALF, JR.
1st Nat'l Bk., Steubenville, Ohio
- BENJAMIN M. MIDDLETON
Medical Arts Bldg., Baltimore 1, Md.
- JAMES E. MIGHT
21 N. Wickliffe Cir., Youngstown 9, Ohio
- LESLIE R. MILES, JR.
82 E. Main St., Lonaconing, Md.
- GEORGE H. MILLER
1202 St. Paul St., Baltimore 2, Md.
- NORMAN L. MILLER
4125 Raleigh Rd., Baltimore 8, Md.
- JOSEPH F. PALMISANO
6608 Loch Raven Blvd., Baltimore 12, Md.
- GEORGE CHARLES PECK
136 Boulevard, Passaic, N. J.
- JAMES RICHARD POWDER
2 E. Read St., Baltimore 2, Md.
- CORBETT L. QUINN
Magnolia, N. C.
- JAMES L. READ
St. Elizabeth's Hosp., Washington 20, D. C.
- JOSEPH B. RICHARDSON
425 So. Florida, Lakeland, Fla.
- LEWIS C. RICHMOND, JR.
1181 Main St., Milton, W. Va.
- JAMES E. ROWE, JR.
1910 Lismer Lane, Catonsville, Md.
- RICHARD ELLIAS SCHINDLER
322 Fayette St., Cumberland, Md.
- JOSEPH E. SHUMAN
A112-1111 Army-Navy Dr.
Arlington 2, Va.
- ROBERT T. SINGLETON
1527 Langford Rd., Baltimore 7, Md.
- THOMAS WAYNE SKAGGS
1208 Huntington Bldg., Miami 32, Fla.
- WILLIAM H. SLASMAN, JR.
Medical Arts Bldg., Baltimore 1, Md.
- W. MEREDITH SMITH
201 Edgevale Rd., Baltimore 10, Md.
- EDWARD V. SPUDIS
Bowman Gray School of Medicine,
Winston-Salem, N. C.
- WILLIAM P. TEMPLETON
1410 Lynn Garden Dr., Kingsport, Tenn.
- MARTIN WILLIAM TREIBER
411 Powell Lane, Westbury, N. Y.
- JAMES TRONEL
355 Jefferson St., Winchester, Va.
- WILLIAM ALVA WAY TYSON
Kingsville, Md.
- ARNOLD L. VANCE
5402 Edmondson Ave., Baltimore 29, Md.
- HERBERT WALTER, JR.
7831 Westlawn Ave., Los Angeles 45, Calif.
- JACK T. WATSON
8343 Zitola Terrace, Plaza Del Rey, Calif.
- KARL HANNA WEAVER
420 Murdock Rd., Baltimore 12, Md.
- JOEL S. WEBSTER
1 Wyoming St., Dayton 9, Ohio
- HARRY S. WEEKS
301 Betty Ave., Wheeling, W. Va.
- ISRAEL H. WEINER
6222 Woodcrest Ave., Baltimore 9, Md.
-
- * Last known address.

5th Year Reunion
Class of 1958
Captain: Stuart Brager, M.D.

- JOHN THOMAS ALEXANDER
Mercy Hospital, San Diego 3, Calif.
- JAMES K. ATON, JR.
324 Chalfont Dr., Baltimore 28, Md.
- WILLIAM G. BARTLETT
600 Ridgewood Ave., Cumberland, Md.
- GEORGE R. BAUMGARDNER
Univ. Hosp., Baltimore 1, Md.
- ELLIOTT M. BERG
Valley Rd., Stevenson, Md.
- MAURICE J. BERMAN
Mercy Hosp., Baltimore 1, Md.

ALUMNI ASSOCIATION SECTION

- GERALD E. BLOOM
Tripler Army Hosp., APO 438,
San Francisco, Calif.
- STUART H. BRAGER
3831 Bowers Ave., Baltimore 7, Md.
- HOWARD DANIEL BRONSTEIN
N. Y. Hosp.—Cornell Med. Ctr.,
New York, N. Y.
- GEORGE J. BURKE
U. S. Public Health, 101 W. 39th St.
Baltimore 10, Md.
- RAYMOND FRANK CAPLAN
Sinai Hosp., Baltimore, Md.
- GAYNE CHUN
1051 Kinau St., Honolulu 14, Hawaii
- GAYLORD LEE CLARK
Roosevelt Hosp., 428 W. 59th St.,
New York 19, N. Y.
- DAVID ARTHUR COPE
Univ. Hosp., Baltimore 1, Md.
- ROBERT E. CRANLEY, JR.
1126 Wilson Ave., Baltimore 7, Md.
- BRUCE N. CURTIS
Box 514, Thatcher, Ariz.
- GILBERT B. CUSHNER
Jackson Mem., Miami, Fla.
- ROBERT LEE DAMM
Box 401, ABQ-A, Saudi, Arabia
- RONALD LEE DIENER
in ASAF
- RAYMOND JOSEPH DONOVAN, JR.
732 Charing Cross Rd., Baltimore 29, Md.
- JOANNE W. ECONOMON
Box 4116, Arlington 4, Va.
- CAPT. RICHARD J. ERICKSON, M.C. 05306984
20th Med. Det. APO 171, New York, N. Y.
- STANLEY N. FARB
5100 Lebanon Ave., Apt. 408, Phila. 31, Pa.
- ALFRED A. FILAR, JR.
Address not known
- HAROLD FISHKIN
Bellevue Hosp. Center, New York 16, N. Y.
- HARRY JOHN FITCH
1400 Main St., Eunice, N. Mex.
- RICHARD R. FLYNN
179 Blythdale, San Francisco 24, Calif.
- HARVEY L. FRIEDLANDER
APO 166, New York, N. Y.
- NEIL M. GOLDBERG
1141 Adams St., Denver, Colo.
- SHELDON GOLDGIER
1737 Moorehead Ave., Durham, N. C.
- BARRETT GOLDSTEIN
Washington Hosp. Center,
Washington, D. C.
- FRANK P. GREENE
228 B Pine Lane, F.C.I. Lompoc, Calif.
- M. S. HALE
26 Seamast Passage, Corte Madera, Calif.
- WILLIAM P. HALL, III
White Mem. Hosp. Cl., Los Angeles, Calif.
- JOHN S. HARSHEY
101 W. Main St., Westminster, Md.
- ALBERT F. HECK
Walter Reed Hosp., Silver Spring, Md.
- WILLIAM J. HICKEN
8605 Drumwood Rd., Baltimore 4, Md.
- ARTHUR C. L. HOLMES
8019 Philadelphia Rd., Baltimore 6, Md.
- ROBERT H. JOHNSON, JR.
Univ. Hosp., Baltimore 1, Md.
- JAY NORMAN KARPA
5829 Western Run Dr., Baltimore 9, Md.
- RICHARD H. KELLER
Salt Lake Co. Gen'l. Hospital,
Salt Lake City, Utah
- JAMES M. KELSH
163 Sabayan Dr., San Antonio 9, Tex.
- JAMES J. KELSO
603 Knollwood Dr., Falls Church, Va.
- FRANK K. KRIZ, JR.
5861 B Adams St., Ft. Knox, Ky.
- DANIEL M. LEVIN
University of Fla. Hosp., Gainesville, Fla.
- HOWARD S. LEVIN
Boston City Hosp., Boston, Mass.
- ARTHUR LITOFSKY
Cleveland Metropolitan Gen'l. Hosp.,
Cleveland, Ohio
- ROBERT C. MACON
Address unknown
- DONALD F. MANGER
4907 Edmondson Ave., Baltimore 29, Md.
- WILLIAM J. MARSHALL, JR.
Cincinnati Gen'l. Hosp., Cincinnati 29, Ohio
- GERALD T. MCINERNEY
Mayo Foundation, Rochester, Minn.
- JOSEPH A. MEAD, JR.
Kimbrough Army Hosp., Ft. Meade, Md.
- JOHN J. MERENDINO
11601 Newport Mill Rd., Silver Spring, Md.

- ERNEST E. MOORE
Gen. Del., Hillsville, W. Va.
- ROBERT B. J. MULVANEY
25 Longfellow Ave., Newark, N. J.
- R. WADE ORTAL
USPHS Native Hosp., Kotzebue, Alaska
- JOHN G. ORTH
8104 Analee Ave., Baltimore 6, Md.
- AYLAND M. OTTINGER
AFB, Glasgow, Mont.
- CHARLES E. PARKER
912 Belleview Blvd., Alexandria, Va.
- ANTONIO PEREZ-SANTIAGO
34 Salud St., Ponce, P. R.
- MICHAEL D. POTASH
2 E. Read St., Baltimore 2, Md.
- JAY T. RAUCH
USAF Hosp., APO 238, New York, N. Y.
- MAURICE M. REEDER
3109 Gunwood Dr., Hyattsville, Md.
- LEWIS H. RICHMOND
USAF, P. O. 17, New York, N. Y.
- ROBERT ROBL
6 Colgate St., Danvers, Mass.
- HAROLD ROLL
Address unknown
- J. DOUGLAS SHEPPERD, JR.
Address unknown
- CHARLES SILBERSTEIN
Jefferson Med., College Hosp.,
Philadelphia 7, Pa.
- GRANGER G. SUTTON, JR.
2631 Whitewood, Pittsfield Village,
Ann Arbor, Mich.
- RAYMOND E. SWANSON
Address unknown
- JAMES E. TAYLOR, JR.
University Hosp., Baltimore 1, Md.
- JEROME TILLES
MOQ 1304, Apt. 1, Andrews AFB,
Washington 25, D. C.
- JAMES H. TYER
Address unknown
- WILLIAM T. WARD
University of Colo. Med. Center,
4200 E. Ninth Ave., Denver 2, Colo.
- ADRIAN S. WEYN
5506 The Alameda, Baltimore 12, Md.
- RICHARD LOUIS WOLFE
Johns Hopkins Hosp., Wilmer Clinic,
Baltimore 5, Md.
- PHILIP D. ZIEVE
10th Floor Clinical Science Bldg.,
Johns Hopkins Hosp., Baltimore 5, Md.
- JAMES B. ZIMMERMAN
4770 Wilmington Pike, Dayton 32, Ohio

Class

NOTES

ELSEWHERE in this edition you will find a "tear out" page, for reporting *Alumni News* to the BULLETIN. This is not an idle gesture.

Your achievements, fellow alumnus, are of interest to your classmates. They constitute a reward to the faculty, are a challenge to the younger physicians, and are an item of prestige for the University. Please cooperate with us by forwarding news of yourself or any alumnus to the BULLETIN. Thank you.

Class of 1911

Charles R. Law of Berlin, Md., writes, "I joined the '50 Year Club' of American medicine last October (1962).

"It might be interesting to my classmates (those who read the BULLETIN) to know that I still practice, both office and home visits, and see patients every day except Sundays."

Class of 1937

Albert Shapiro has announced the removal of his office to Park Rogers Medical Center, 3502 W. Rogers Ave., Baltimore 15, Md., for the practice of Dermatology.

Class of 1938

Ted and Celeste Woodward have been working intensely on the plans for the 25th reunion of the Class of 1938. They have been ably assisted by Sidney Scherlis and John Scott. Ted and Celeste will arrange the banquet. A committee composed of Ed Siegel, Aaron Feder, and Ted Woodward are concerned with the scientific program. The reception

committee consists of Drs. John M. Scott and Sidney Scherlis, co-chairmen, with Ed Siegel and Celeste Woodward, Aaron Feder and John Wagner.

In some recent correspondence with the Editor, **John Z. Bowers** writes: "We are having a good year in Japan and I would say that our children are having the greatest experience of their lives. I am a visiting professor at Kyoto University and am also studying several other medical schools. It appears that medical education in Japan is as different from the U. S. A. as one could possibly discover. . . ."

John Bowers is serving as Alan Gregg Fellow of the China Medical Board of New York and is also visiting professor at the Kyoto University Faculty of Medicine.

Class of 1940

Schuyler G. Kohl has been named Professor of Obstetrics and Gynecology at the State University of New York Downstate Medical Center, 450 Clarkson Ave., Brooklyn 3, N. Y.

William R. Wolff has been appointed attending surgeon and associate director of Surgery at the Beth Israel Hospital, New York City. Dr. Wolff also serves as attending surgeon at the St. Vincent's Hospital in New York City and is consultant in cardiovascular surgery at the St. Vincent's Hospital in Staten Island. Dr. Wolff conducts one of the seven approved centers for open heart surgery in New York at St. Vincent's Hospital there. He is active in a teaching program in surgery for fourth-year students at Bellevue Medical Center. He also serves as attending thoracic surgeon at the Bronx and Montrose Veterans Hospital. Dr. Wolff lives at 16 Ridge Rd., Tenafly, N. J.

Deaths

Class of 1945

Frank J. Ayd served as a member of a panel on "Suicide and Depression" at the recent meeting of the A.M.A. held in Los Angeles.

Class of 1946

Thomas C. McPherson has been named medical director of the western area of the Mead Johnson Laboratories with offices at 4 W. 4th Ave., San Mateo, Calif.

Jerome D. Nataro of 42 Bluegrass Lane, Levittown, N. Y., has just completed his residency in Otolaryngology at the Brooklyn Eye and Ear Hospital in New York. Dr. Nataro was in general practice for some 10 years in Levittown, N. Y., prior to entering his specialty. He will again return to Levittown.

Class of 1952

Paul H. Gislason practices Orthopedic Surgery in Mankato, Minn., and serves as clinical instructor in Orthopedic Surgery at the University of Minnesota Medical School. He is a member of the American Academy of Orthopedic Surgery and was recently elected a Fellow of the American College of Surgeons.

Dr. Gislason resides at 114 E. Main St. in Mankato, Minn.

Class of 1954

Stuart M. Brown has entered the private practice of Dermatology with offices at 3707 Gaston Ave., Dallas, Tex. Dr. Brown, who has been on active duty in the U. S. Army since July, 1955, has completed his residency in Dermatology at the Brooke General Hospital from January, 1957 through December, 1959. Dr. Brown, who received his Board certification in 1961, will be associated in practice with Dr. Coleman Jacobson.

Class of 1892

Leonard B. Johnson of Morganza, Md., died recently.

Samuel J. Summers of Cameron, S. C., died in October, 1952.

P & S 1896

Jesse C. Coggins, owner and director of the Laurel Sanitarium (Laurel, Md.), died at his home on January 21, 1963. Dr. Coggins was 88.

Following his graduation from the College of Physicians and Surgeons, he served on the staff of the Spring Grove State Hospital for nine years and then opened the Laurel Sanitarium in 1905, a venture which was to become his life work.

P & S 1901

Jacob A. Baer of Honesdale, Pa., died recently.

Michael A. Conboy of Auburn, N. Y., died recently.

Andrew J. Loughnan of Oconomowoc, Wisc., died on October 4, 1962, at the Veterans Hospital of bronchopneumonia. Dr. Loughnan was 89. He was a past-president of the Waukesha County (Wisc.) Medical Society.

Class of 1903

Robert W. Fisher of 235 High St., Morgantown, W. Va., died recently.

Samuel J. King, an alumnus of both the Maryland College of Pharmacy and the School of Medicine, died on October 28, 1962, at the Deaconess Hospital in St. Louis, Mo.

Dr. King, who practiced at 7206 Dale Ave., was an Ophthalmologist and was

on the staff of Deaconess Hospital for 45 years.

Class of 1904

Alpheus E. Dann of P. O. Box 126, Canton, Pa., died on October 12, 1962.

Jesse O. Purvis of 40 Franklin St., Annapolis, Md., died on September 3, 1962, at the age of 82.

Class of 1905

James S. Billingslea, who practiced for many years in Glen Burnie, Md., died on February 21, 1963. Dr. Billingslea devoted his life to general practice in the Glen Burnie community, retiring only recently. For many years he served as physician at Severn Preparatory School and as a member of the Anne Arundel County Board of Police Examiners. He also served 17 years as a member and President on the Anne Arundel Board of Education. He was a Director of the Maryland National Bank and was active in the University of Maryland Alumni Association.

James G. Matthews of 407 W. Riverside Ave., Spokane, Wash., died on November 11, 1962. Dr. Matthews was 81.

Class of 1908

William M. Hollyday of 36 Edwin Place, Asheville, N. C., died on October 15, 1962.

Class of 1909

James A. Hughes of 213 W. 3rd St., Mt. Carmel, Pa., died on November 7, 1962. Dr. Hughes was 79.

Harry M. Robinson, Sr., Professor Emeritus of Dermatology, died on March 17, 1963. Doctor Robinson's obituary will appear in a forthcoming edition of the BULLETIN.

Neale S. Stirewalt of 703 E. Lexington Ave., High Point, N. C., died on August 1, 1962, at the age of 80.

P & S 1910

Charles W. Maxson of 7 Trenton Ave., Point Pleasant Beach, N. J., died on December 30, 1962. Dr. Maxson was 77.

Class of 1911

Harry B. Schaeffer of Shillington, Pa., died recently.

Joseph Stomel, 460 S. Manhattan Place, Los Angeles, Calif., died on September 27, 1962. He was 73.

P & S 1912

Lucian D. Johnson, 1202 Race St., Connellsville, Pa., died on September 6, 1962, at the age of 74.

B. M. C. 1913

Lyman W. Gay-Lord of 205 E. Mt. Royal Ave., Baltimore, died recently.

Charles B. Leone of Wilmington, Del., died recently.

James B. Morrison of Ashland, Me., died recently.

Edward W. Riley, 2603 Key Blvd., Arlington, Va., died on October 4, 1962.

Class of 1914

Hugh E. Clark, 35 N. Braddock St., Winchester, Va., died on September 24, 1962. Dr. Clark was 72.

Class of 1916

Albert G. Hahn, 1335 12th St., Hickory, N. C., died on October 9, 1962.

Lawrence G. Miller of Relay, Md., died on October 10, 1962, at St. Agnes Hospital, Baltimore, at the age of 76. His death was due to congestive heart failure.

PLEASE TEAR OUT

ALUMNI NEWS REPORT

TO THE BULLETIN:

I would like to report the following:

TEAR OUT

SUGGESTIONS FOR NEWS ITEMS

American Board Certification
Change of Address
Change of Office
Residency Appointment
Research Completed
News of Another Alumnus
Academic Appointment
Interesting Historic Photographs

Name _____

Address _____

Class _____

Send to

Bulletin—School of Medicine
University of Maryland
31 S. Greene St.
Baltimore 1, Md.

BULLETIN *School of Medicine* *University of Maryland*

VOLUME 48

JULY, 1963

NUMBER 3

An Anomaly of the Intrapetrous Portion of the Facial Nerve

JAMES J. GERLACH, M.D., and DAVID A. COPE, M.D.

THE PURPOSE of this paper is to report a rare intrapetrous facial nerve anomaly heretofore unmentioned in the world literature. One of us (J. G.) encountered the anomaly in the course of a series of 53 temporal bone dissections on the cadaver. Upon each wet specimen successive surgical procedures were performed beginning with a cortical mastoidectomy and progressing to the petrous apicectomy. The anomaly was found in the 43rd temporal bone, the right ear of a 49-year-old female.

Preliminary inspection revealed a somewhat small, brachycephalic individual with a normal auricle, external auditory meatus, and an intact tympanic membrane. A mastoid process was present. Next, the cortex of the temporal bone was exposed by means of the three Lempert endaural incisions. The middle fossa dural plate, sigmoid sinus plate, digastric ridge, three semicircular canals, and posterior meatal wall were delineated during the complete removal of the mastoid cell structure. Upon removing the superior-posterior bony wall of the external auditory meatus and reflecting the meatal skin and tympanic membrane

forward, an intact ossicular chain was seen.

Upon removal of the incus, the abnormal transtympanic course of the facial nerve was recognized. Further dissection revealed that the nerve upon leaving the geniculate ganglion region and turning around the anterior extremity of the superior semicircular canal divided into two trunks which then embraced a slim somewhat elastic stapes and rejoined below. Both parts were devoid of bony covering. The smaller superior trunk coursed between the external semicircular canal and oval window in a relatively normal relationship. The larger inferior trunk, however, passed below the oval window. The trunks rejoined at the junction of the pyramidal and descending portion of the nerve. The descending portion of the nerve was normal in configuration and position.

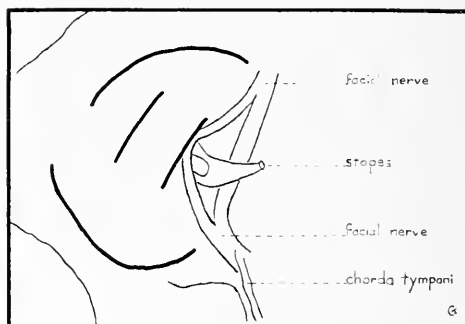
No statistics are available concerning the incidence of intrapetrous facial nerve anomalies for they are too rarely encountered. The reported anomalies may be conveniently divided into two broad categories:

1. An anomalous course associated

From the Division of Otolaryngology, School of Medicine University of Maryland.



Photograph of the Anomaly



Diagrammatic Sketch

with a congenitally deformed temporal bone.

2. An anomalous course in an otherwise anatomically normal temporal bone.

The first category contains the most frequently reported anomalies. Botros,² and Henner and Buckingham⁵ have compiled all of the reported cases.

The second category is rarer in occurrence. The literature is covered thoroughly by Botman and Jongkees,¹ Fowler,³ Hawley,⁴ Kettle,^{6,7} and Rulon and Hallberg.⁸ Their cases and the reports they review involve invariably the descending portion of the facial nerve. This example is the first reported anomalous horizontal transtympanic portion of the nerve in an otherwise anatomically normal temporal bone.

In summary, we have described an anomaly of the horizontal transtympanic portion of the facial nerve in an otherwise normal temporal bone. A classification of the anomalies is given and a bibli-

ography of the world literature concerning these anomalies is provided.

Bibliography

1. BOTMAN, J. M. and JONGKEES, L. B. W.: Endotemporal Branching of the Facial Nerve. *Acta Oto-Laryngologica*, 45:111, 1955.
2. BOTROS, G.: The Facial Nerve in the Surgery of Congenital Atresia of the Ear. *Annals of Otology, Rhinology, and Laryngology*, 66:173, 1957.
3. FOWLER, E. P., JR.: Variations in the Temporal Bone Course of the Facial Nerve. *Laryngoscope*, 71:937, 1961.
4. HAWLEY, C. W.: *Illinois Medical Journal*, 41:116, 1922.
5. HENNER, R. and BUCKINGHAM, R. A.: The Recognition and Surgical Treatment of Congenital Ossicular Defects. *Laryngoscope*, 66(5):526, 1956.
6. KETTLE, K.: Abnormal Course of the Facial Nerve in the Fallopian Canal. *Archives of Otolaryngology*, 44:406, 1946.
7. KETTLE, K.: *Peripheral Facial Palsy: Pathology and Surgery*. Charles C Thomas, Springfield, Ill., 1959.
8. RULON, J. T., and HALLBERG, O. E.: Operative Injury to the Facial Nerve. *Archives of Otolaryngology*, 76(2):131, 1962.

John Conrad Hemmeter

FRANK W. HACHTEL, M.D.*

AT THE TIME of his death in 1931, Dr. Hemmeter had distinguished himself equally by his aspirations and achievements as a practitioner of his specialty, a teacher of gastroenterology and physiology and as an investigator. He had at one time possessed a great influence on the administration of the School of Medicine of the University of Maryland and had seemingly had the further improvement of the School at heart. Furthermore, he had shown a deep interest in the history of medicine and the life and work of outstanding members of the profession, had delivered many lectures on medical history and biography, and published many articles on those subjects. A number of these were afterward collected in his book, *Master Minds in Medicine*. Hemmeter had also earned a reputation for versatility, learning, and broad culture. Among the arts, he had particularly shown a great aptitude for music and no superficial knowledge of musicology. He demonstrated his ability as both an executant on the piano and a composer. Before his retirement, he had been honored by a *Festschrift in Medical Life* to which his colleagues here and abroad contributed. And yet, among some physicians, when his name was mentioned, it was met either with a raised eyebrow or an opinion implied, rather than overt, that he had not quite lived up to his rather widespread reputation.

To the question why this should be, it is difficult to find a definitive answer: "What is known can seldom be imme-

diately told, and when it might be told, it is no longer known. The delicate features of the mind, the nice determination of character, and the minute peculiarities of conduct are soon obliterated." Only those who had known him long and intimately could be in a position to give an authoritative response. Since it is no longer possible to talk with them, the best one can do—recognizably inadequate—is to consult the writings by and about him with the hope of attaining some intimation of an answer, "dusty" though it be.

We may begin with Hemmeter's autobiography. It doubtless requires a certain egotistical attitude to write a life of oneself. However, the "I" is not too obtrusive in this work. Furthermore, he expresses his great respect for and devotion to his father and his continuing friendship with a number of his former teachers. Also one discovers here his early love of music and some indication of the intensity with which he applied himself to its mastery. His enthusiasm was so great that he organized and directed an orchestra and chorus at the Baltimore City College. Later (1903) he established the University of Maryland Musical Association which had some years of active life.

Dr. Hemmeter's essays and lectures were not limited to gastroenterology and physiology, but covered an extensive field as even a cursory glance at the table of contents of *Master Minds in Medicine* will show. In his lectures, he had the merit to organize his ideas and present them in a manner that held his audience. His essays display an equal

* Emeritus Professor of Bacteriology, School of Medicine, University of Maryland, Baltimore.

ability to keep the reader's attention by an ordered and lucid presentation, but a presentation without any attempt at elegance of expression.

As a gastroenterologist, Hemmeter not only wrote the first complete text in English on the specialty, but carried out a number of investigations. Shortly after Roentgen's discovery, Hemmeter used x-rays in the study of the normal and diseased stomach. He at first claimed priority for this despite his elsewhere expressed unfavorable opinion of such claims. Later on he admitted this assumption might have been erroneous. The literature on the subject of priority in the use of Roentgen rays in the diagnosis of gastrointestinal diseases is somewhat confusing. Hemmeter was undoubtedly among the earliest to use x-rays to this end.

Another early experiment demonstrated the practicability of duodenal intubation. He would seem to have been the first to pass a tube through the pylorus and collect uncontaminated duodenal fluid. Furthermore, his interest in cancer of the stomach led him quite early to devise a method of obtaining fragments of mucosa for microscopic examination. The adoption of this procedure was stimulated by previous reports of Cohnheim.¹ Hemmeter reported making an early diagnosis in a series of patients by this method. The idea was unquestionably excellent, but it may be that he was overenthusiastic and that some of his criteria for diagnosis would not withstand critical analysis.

Dr. Hemmeter was Professor of Physiology at the University of Maryland School of Medicine for many years. Before assuming this responsibility, he had received training under some eminent

physiologists, notably Emil du Bois-Reymond. From his published articles, he seems to have had a clear idea of the nature of a course in physiology adapted to medical students as well as of the technical and scientific qualification of a teacher of the course. He saw physiology had made such advances that it was no longer admissible to appoint almost any practitioner of medicine to the chair. Consequently in 1907, Dr. and Mrs. Hemmeter established a fund for the endowment of this chair in agreement with the Trustees of the Endowment Fund of the University of Maryland. The conditions of this agreement may be found in the Hospital Bulletin of May 1912.

While teaching physiology, Hemmeter and his associates carried out various investigations. He reported, as a result of one of these, the discovery of a hormone in an extract of the salivary gland that partly restored a depressed gastric secretion. This led to an interchange of views between Dr. A. S. Loewenhardt and Dr. Donald Hooker on one side and Dr. Hemmeter on the other. Hemmeter, in part as a result of this criticism, later acknowledged he had not established as a hormone the active principle in the extract and was convinced that extracts of salivary glands were capable in themselves of mimicking the action of a hormone.

Hemmeter's major contributions to medical history and biography as stated earlier appear in his *Master Minds in Medicine*. This is, of course, neither the place nor the time to give a review of this book, but one cannot pass it by unnoticed. It had in the first place the happy circumstance of an introduction by Karl Sudhoff. A mere glance over the table of contents will reflect Hemmeter's broad interest and a reading of the papers

¹ P. Cohnheim, *Archiv f. Verdauungs-Krankheiten*, Bd I, p. 274.

will show the interest was often penetrating. Dr. Hemmeter devoted a number of the early chapters to a discussion of methods of historic research, and these chapters display his thorough understanding of historiography and the art of writing history. Among the most interesting essays are those on Theodor Billroth and Albrecht von Haller. These bring the distinguished men to life and emphasize their attainments in medicine and the arts. They were evidently written *con amore*. Another man of many parts to whom Hemmeter gives an article is the scholarly Rudolf Virchow. He presents Virchow as a physical anthropologist and archaeologist of which departments of science he was one of the creators and ornaments. Other articles patently composed with both head and heart are (1) those on the Army Yellow Fever Commission and (2) those on Henry Carter. The former deal largely with James Carroll and the investigation of Finlay's hypothesis of the transmission of yellow fever by the mosquito; the latter with Dr. Carter's studies on the epidemiology of this disease. Carter's work has never received its just due, although it clearly influenced Read and the character of his investigation. Dr. Hemmeter was very naturally attracted to the genius artist and polymath Leonardo. The result was a series of papers on da Vinci. In them, he treats of Leonardo's personality and attempts to assay the value of his scientific accomplishments. There are many more essays on men of more or less eminence in this book, but space will not permit their consideration. However, one cannot lay it aside without mention of those on the precursors of Harvey. Hemmeter tried in them to assess the credit due to Colombo, Caesalpinus, and Servetus. Though he may have too heavily empha-

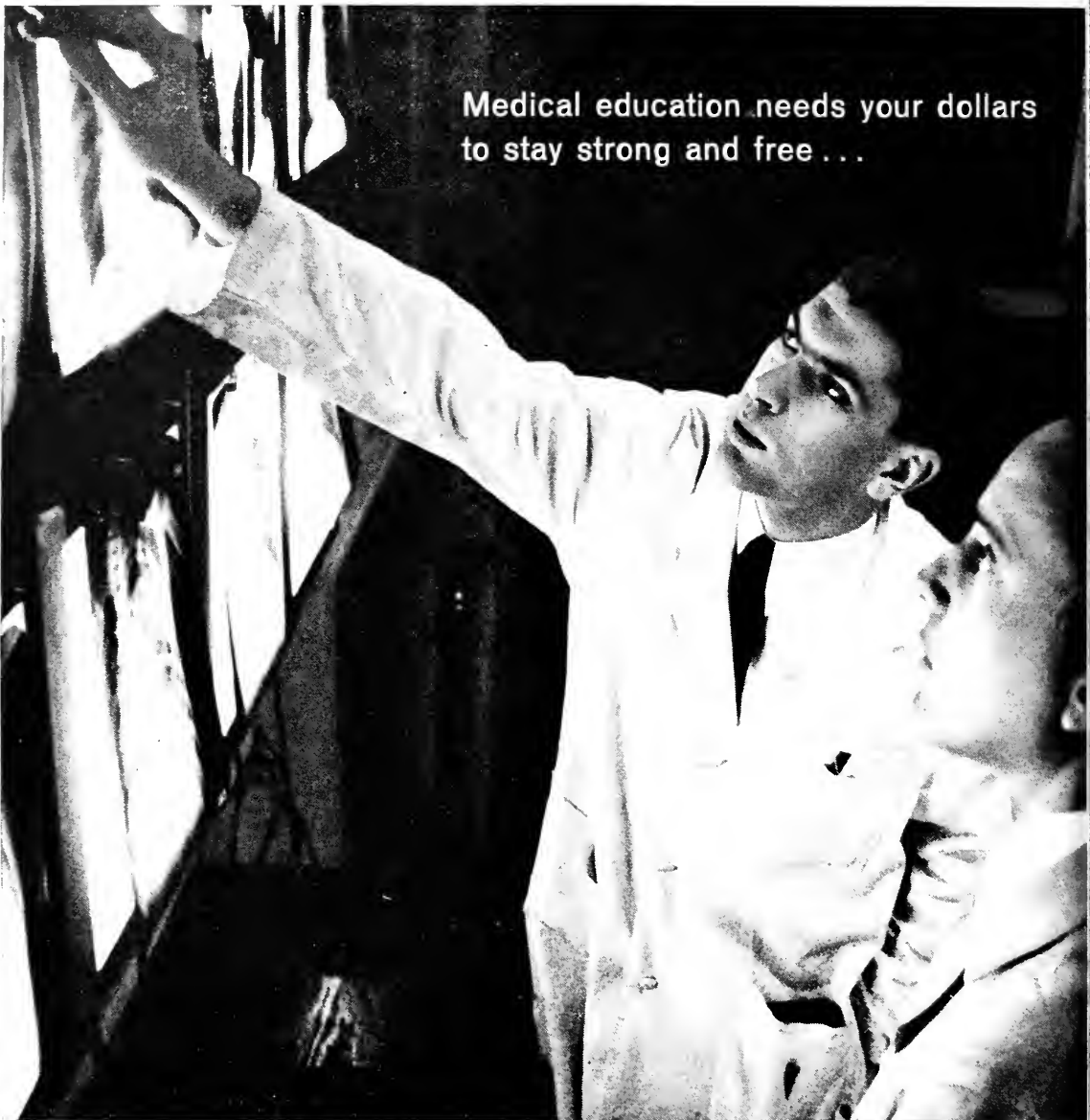
sized the importance of this work, yet it is well, from time to time, to have our attention called to their contributions to the subject of the circulation of the blood. He does this without derogating from the genius of Harvey.

In the *Festschrift* are tributes by a number of the leaders in medicine and surgery and the history of medicine, as well as friends and teachers outside the medical profession. They not only stress Hemmeter's professional ability but testify to his broadmindedness, tolerance, versatility, scholarship, and culture.

Sudhoff² especially speaks of the range of Hemmeter's intellectual interest and unusual psychic receptivity. His deepest cultural interest was in music. He had exhibited an almost precocious concern for this and had been well trained. His knowledge, thorough training, and competence in music were well illustrated on the occasion on which he substituted for the suddenly stricken director of an orchestra. Although naturally in such circumstances the performance was not impeccable, it was by all accounts quite enjoyable and Dr. Hemmeter received the applause of both audience and orchestra.

And what of the answer to the earlier question? "So differently are things seen! And so differently are they shown! But actions are visible, though motives are secret." So the answer may be, if answer there be, that the various friends and acquaintances of Dr. Hemmeter each saw different traits. Some were able to view him in the round, others were mainly, perhaps too deeply, impressed with his less exemplary characteristics.

² Karl Sudhoff, *Master Minds in Medicine*, p. xxiii.



Medical education needs your dollars
to stay strong and free . . .

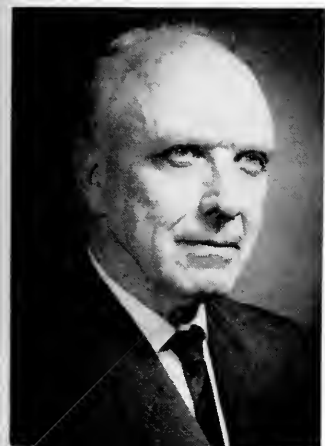
Give to the
school of your choice
through AMEF

American Medical Education Foundation

To train the doctors of tomorrow,
the nation's medical schools must have
your help today. It is a physician's unique
privilege and responsibility to replenish
his own ranks with men educated
to the highest possible standards.
*Invest in the future health of the nation and
your profession. Send your check today!*



535 North Dearborn Street
Chicago 10, Illinois



Dean's LETTER

MEDICAL SCHOOL SECTION

*Dear Members of the Alumni and Friends of the
Medical School:*

Those of you who have had the opportunity to visit the campus of the medical school in recent months have seen that the urban renewal project is really underway. Many old buildings in the vicinity of the medical school and University Hospital are being raised so that new construction will be possible. The Basic Science Building (Howard Hall) blends well with the other buildings in the hospital area. It is an imposing structure and will give the medical school adequate basic science teaching and research space that has been needed for a long time.

The National Congress H. R. 12 "Aid to Medical Education" has passed the House and should pass the Senate prior to the publication of this letter. If such is the case, matching funds should be available to allow the medical school to add a new hospital building to provide for clinics, services, and better patient teaching areas. If this can be accomplished, it will be an important step in making it possible for Maryland to become an outstanding program of medical education.

Your understanding and assistance in support of these activities will be much appreciated.

Sincerely,

WILLIAM S. STONE, M.D.

Dean



Members of Trustees of the Endowment Fund (left to right): Mr. James C. Bird, Mr. Austin C. Diggs, Dr. Wetherbee Fort, Dr. C. Reid Edwards, Dr. Everett S. Diggs, Mr. H. Vernon Eney, Mr. F. W. Hewitt, and Mr. C. W. Shaeffer. Not included in the group are: Dr. H. Boyd Wylie (now deceased) and Dr. H. C. Byrd.

Trustees of the Endowment Fund of the University of Maryland

ALUMNI AND FRIENDS of the University are aware of the many sources of income which provide the backbone for teaching and research in a large medical school. However, the School of Medicine possesses an organization, perhaps unique among medical schools, an organization by charter, devoting its entire assets toward the improvement of the school, yet having no tangible connection with the organization of the medical school. Such is the Trustees of the Endowment Fund of the University of Maryland.

Created in 1892 solely for the purpose of the School of Medicine but not being a part of it, the Trustees has had a long record of continuous activity and has been the recipient of many bequests and donations. The Trustees is one of the constant and predictable sources of "outside" income for the School of Medicine and is carefully managed and is constantly seeking bequests and donations in order to improve the background of its endowment.

Since the details of the Trustees were

known to such a few of the Faculty and Alumni, the BULLETIN asked its President, Dr. Charles Reid Edwards, to prepare for the BULLETIN an account of the history, the membership, the organization, and the activities of the organization. Dr. Edwards' remarks follow.

At the Annual Meeting of the Medical Alumni Association in 1892, a "proposition to secure an endowment fund" was made. The idea was favorably received. On May 12, 1893, the first meeting was held, for purposes of organization. This having been accomplished rather quickly, a title of the Board was thereafter known as "The Trustees of the Faculty of Physics of the University of Maryland." It was properly established on June 29, 1893, having been incorporated under the laws of the State of Maryland.

This Board was constituted to "receive, invest, and control at its discretion, this fund for the exclusive benefit of the School of Medicine, with the limitation that no portion of the principal of said fund be expended." This contem-

MEDICAL SCHOOL SECTION

plated an organization entirely independent of the authorities, the University, and even the Alumni Association. The original plan called for nine members of the Board of Trustees. This arrangement has always been followed. The first members were: Mr. Frank Frick, President; Mr. Thomas Hall, Vice-president; Mr. Lawrason Riggs, Secretary-Treasurer; Dr. Henry Wilson, Dr. Charles O'Donovan, Dr. Eugene Cardell, Dr. Samuel Chew, Dr. J. Edwin Michael, and Mr. Richard McSherry.

In 1904 legislation amended the articles of incorporation, to change the name to "The Trustees of the Endowment Fund of the University of Maryland." The same amendment established perpetual succession of the members of the Board.

During the ensuing years, new members of the Board were elected from time to time to replace those who resigned because of ill health or to fill vacancies caused by death. The following men have been members of the Board:

Judge Henry Stockbridge
Dr. Samuel C. Chew
Dr. Harry Adler
Dr. Thomas A. Ashbury
Mr. Allan MacSherry
Mr. J. Harry Tregoe
Dr. Eugene F. Cardell
Dr. J. W. Hering
Mr. Clayton C. Hall
Mr. Conway W. Sams
Dr. Henry P. Hynson
Dr. B. Merrill Hopkinson
Mr. John B. Thomas
Mr. Charles Markell
Dr. Horace M. Davis
Mr. Stuart S. Janney
Dr. Randolph Winslow
Dr. J. M. H. Rowland
Dr. Arthur M. Shipley
Mr. Robert Griswold
Mr. Daniel Baker
Dr. John B. Thomas
Dr. E. E. Kelly

Mr. Henry Holzapfel, Jr.
Mr. Albert Burns
Dr. H. C. Byrd
Dr. H. Boyd Wylie
Dr. C. Reid Edwards
Dr. Horace E. Flack
Judge W. Conwell Smith
Judge William P. Cole, Jr.
Dr. Wetherbee Fort
Mr. Austin C. Diggs
Dr. Henry F. Ulrich
Mr. H. Vernon Eney
Dr. Everett S. Diggs
Mr. Frederick M. Hewitt
Mr. James B. Bird

Funds entrusted to the Trustees of the Endowment Fund are of two main types.

1. Donations made by various alumni, their families, or friends. These sums have always been used for specific purposes as indicated by the donors. Some of them to "a fixed corpus," the incomes only to be spent; others donated for the support of scholarships or fellowships, as long as the corpus could provide the amount.

The value of the scholarships, while usually designated, was also left to the discretion of the Trustees who, when consulting with the Faculty, could decide on an adequate amount. Thus, through the 70 years of its existence, the Board of Trustees has been able to turn over many sums to aid the students and also the Medical School.

2. The Frank C. Bressler Research Fund. In 1950 the Trustees of the Endowment Fund had turned over to them funds willed by the late Dr. Frank C. Bressler, who specified that the income, only, from these funds was to be used for research.

Dr. Bressler was deceased about 15 years previous to the time that the Board of Trustees became the recipients of this sum of money. During the time between the death of Dr. Bressler and the receipt of the funds by the Trustees of the En-

dowment Fund, the estate was controlled by a trust company and the executors of the will and increased in value very considerably. During that time about \$280,000, with a similar amount obtained by the University of Maryland from other sources, was used to construct this "Bressler Building for Research." The use of this amount of money was agreed to by the executors of the estate, and this proved to be a very happy solution to a difficult problem at the Medical School, as there had been no accommodations for research.

Therefore, when the Bressler Funds were turned over to the Trustees of the Endowment Fund, the stage was set for a regular performance. It was decided to protect the investments, earn as much as possible, and make available the income for the benefit of research. This course has been followed. In order to take advantage of investments, the Trustees employed T. Rowe Price and Associates, who have provided consistently good advice and have made it possible to maintain the earnings at as high a level as is commensurate with safety.

Grants from the various funds are made only through the Dean of the Medical School who, in turn, clears the requests from various departments, pre-clinical and clinical, through the Heads of the Departments and the Faculty Board. In this manner the Bressler Funds, especially, are distributed to a number of departments which is what the donor desired.

Current Members

Dr. H. C. Byrd	October 6, 1936
Mr. Austin C. Diggs	November 7, 1955
Dr. Everett S. Diggs, Sec.-Treas.	May 4, 1958
Dr. C. Reid Edwards, President	June 22, 1944
Mr. Vernon H. Eney	April 11, 1957

Dr. Wetherbee Fort	June 29, 1955
Mr. F. W. Hewitt	May 18, 1960
Dr. H. Boyd Wylie	February 11, 1941
*Mr. James C. Bird	May 4, 1958
*Resigned late in 1962 because of ill health.	

In the General Endowment Fund there are 26 individual accounts. Some of them were begun in the 1890's; many have been added from time to time. They have provided for scholarships in varying amounts through the years and are awarded to worthy students recommended by the Scholarship Committee and the Dean of the medical students.

The class of 1916 established a memorial student loan fund and in 1961 loans were made to the amount of \$350.00 to each of five students. These funds also support lectureships, fellowships, and some specific investigations, and in 1962 supported 8 scholarships.

The Bressler Fund has been a source of income for the support of research, and because of the profit realized by cashing various War Bonds when due, the Trustees have been able to make available a sum quite in excess of the anticipated income. This has amounted to as much as 20% average.

In 1962, the Bressler Fund supported 18 research projects, amounting to over \$59,000.00.

Dr. Arnold D. Welch, Sixth Band Lecturer

THE SIXTH Alice Messinger Band Memorial lecture of the Department of Medicine, School of Medicine, was held on March 21, 1963, in the Gordon Wilson Hall, featuring Dr. Arnold D. Welch, Eugene Higgins Professor of Pharmacology at Yale University School of Medicine. Dr. Welch spoke on the topic "Recent Developments in Cancer and Virus Chemotherapy."

Department of Biochemistry Reorganized

Dr. Elijah Adams Professor of Biochemistry



DR. ELIJAH ADAMS, Professor and Director of the Department of Pharmacology of St. Louis University School of Medicine, has been named Professor of Biochemistry at the School of Medicine, University of Maryland.

A native of Buffalo, N. Y., Dr. Adams is a graduate of the Johns Hopkins University in the Class of 1938. He received his Doctor of Medicine degree at the University of Rochester. The next year he served as an intern at the Strong Memorial Hospital, then saw service in the U. S. Army from 1943 to 1946. He served as Assistant in Pathology at the Yale University School of Medicine and was then appointed a Public Health Service Postdoctoral Fellow in the Department of Physiological Chemistry at Yale, a post he held for one year. He then served as Assistant Resident in Medicine at the Grace-New Haven Hos-

pital, followed by an American Cancer Society Fellowship in the Department of Physiological Chemistry at the University of California in Los Angeles. From 1950-1955, he served in the U. S. Public Health Service, first as a visiting investigator of the Laboratory for the Study of Hereditary and Metabolic Disorders at the University of Utah, and was then a member of the Section on Biochemical Pharmacology, National Institutes of Health. He also served as Associate Professor of Pharmacology at the New York University School of Medicine, prior to his appointment at the St. Louis School.

Dr. Adams is the author of a large number of scientific publications related to experimental pharmacology and pathology, and biochemistry. He is a member of the American Society of Biological Chemists, the American Society of Phar-

New Appointees in Department of Biochemistry



Dr. Audrey L. Stevens



Dr. Seymour H. Pomerantz

macology & Experimental Therapeutics, the American Chemical Society, the American Association for the Advancement of Science, Phi Beta Kappa, Alpha Omega Alpha, and Sigma Xi.

Concurrent with the general reorganization of the department, two new appointments have been made. The first is that of DR. AUDREY L. STEVENS, an alumnus of the Iowa State University and of the Western Reserve University, where she obtained her Doctor of Philosophy degree in Chemistry in 1958.

Following her graduation, she served as a National Science Foundation post-doctoral Fellow at the National Institutes of Health in Bethesda, Md., from 1958 to 1960, and was then appointed Instructor in Pharmacology at the St. Louis University School of Medicine, being promoted to Senior Instructor in 1960 and in 1962 to Assistant Professor.

Dr. Stevens is the author of a number of technical papers relating to nucleic acids and nucleal protein synthesis.

Another newcomer to the department will be DR. SEYMOUR H. POMERANTZ, a

native of Houston, Texas, and a graduate of the Rice Institute and later of the University of Texas, where he received his Doctor of Philosophy degree in 1952. Dr. Pomerantz then served successively as a Teaching Fellow at the University of Texas, Research Assistant at the University of Illinois, Senior Instructor at Western Reserve University, and as Assistant Professor of Biochemistry, also at Western Reserve. Later he was Assistant Professor of Pharmacology at the St. Louis University.

He is a member of the American Chemical Society, The Chemical Society of London, Phi Lambda Upsilon Fraternity and the Society of Sigma Xi. Dr. Pomerantz is also the author of a large number of technical publications in biochemistry and related fields.

Members of the Department of Biochemistry who will continue in the newly-organized department are: Dr. Samuel P. Bessman, Associate Professor; Dr. Arthur J. Emery, Jr., Dr. Emnis C. Layne, and Miss Ann Virginia Brown will serve as Instructor in Biochemistry.

Faculty

NOTES

Dr. Woodward Honored

DR. THEODORE E. WOODWARD, Professor of Medicine, delivered the Mary Scott Newbold Lecture in Philadelphia on February 6. Dr. Woodward spoke on the topic, "Typhoid Fever: A Discussion of its Pathogenesis, Physiologic Abnormalities, and Management."

The lectureship, established in 1917 by Mr. Clement B. Newbold of Philadelphia, serves directly as a memorial of his wife, and indirectly as a lasting and continuously useful tribute to the Fellows of the College of Physicians of Philadelphia who were their friends—most particularly among them Mr. Newbold's brother-in-law, Dr. William J. Taylor (1861-1936).

The lecture was presented to members and guests of the Philadelphia College of Physicians and was given in the fine, old medical hall of that well-known organization.

The Newbold Lectures have been given annually on widely varying subjects, the Newbold lecturers having included such men as Hans Zinsser, Eugene L. Opie, George R. Minot, Sir Thomas Lewis, C. U. Ariens-Kappers, Thomas M. Rivers, Albert B. Sabin, and Rene J. Dubos.

Dr. Charles Van Buskirk Resigns as Professor of Neurology

DR. CHARLES VAN BUSKIRK has resigned his position as Professor of Neurology in the School of Medicine to enter private practice at York, Pa. Until a successor is named, Dr. Jerome K. Merlis will serve as acting Professor of Neurology.

Dr. Henderson Honored with Markle Scholarship

DR. MAUREEN M. HENDERSON, Assistant Professor of Preventive Medicine, has been recently nominated a Markle Scholar in postgraduate medicine.

DR. OTTO C. BRANTIGAN, Professor of Clinical Anatomy in the School of Medicine, is a recent author of a volume on surgical anatomy.

DR. R. C. VAIL ROBINSON, Associate Professor of Dermatology at the School of Medicine, spoke on the subject "Dermatologic Problems of the Later Years" at the annual Spring Scientific Assembly of the Maryland and District of Columbia Academies of General Practice meeting on May 11, 1963.

DR. EARL P. GALLEHER, Associate Professor of Urology in the School of Medicine, also addressed the joint meeting, speaking on the subject "Common Urologic Difficulties of the Aged."

Dr. Grenell Receives Large Grant

DR. ROBERT C. GRENELL, Professor of Neurobiology in Psychiatry, has received a grant of \$39,600 from the National Science Foundation to support his research on regulatory mechanisms of brain cells, and particularly the nature of the cell membrane.

Dr. Grenell recently returned, after a period of nearly two years as Visiting Professor of Pharmacology at the Medical College in Trivandrum, South India.

Alpha Omega Alpha Lecture

SIR RUDOLPH PETERS, noted British biochemist, was the annual Alpha Omega Alpha lecturer, speaking on April 5, in the auditorium of the Health Sciences Library. Dr. Peters' subject was "Lethal Synthesis."

Twenty Five Years Ago in the

BULLETIN

JOHN C. KRANTZ, JR.

THE EVER-LENGTHENING PAST of our venerable institution serves to inspire those who today represent its dynamic present and who are planning its ever-expanding future achievements. A quarter of a century ago, as today, the BULLETIN was portraying the activities of the Alumni Association and its Medical School. It reveals a "goodly heritage" with men of vision, devoted teachers and great physicians who labored within these halls.

The distinguished surgeon, the late Dr. Robert P. Bay, was President of the Alumni Association in 1938 and was active in the affairs of the organization. Dr. Howard M. Bubert wrote an excellent article on the neurological complications of the administration of horse serum and Dr. Harry M. Robinson, Jr., who is now Professor of Dermatology, reported an interesting case of urinary retention in a patient after the bite of a black widow spider. The Eugene Fauntleroy Cordell Society of Medical History of the Medical School was functioning at its height at this time and there were many papers published in the BULLETIN that were presented before this society. Among these, the late Dr. Alexius McGlauman gave an interesting review of the medical schools of Baltimore and the late Dr. G. Carroll Lockard, who was Professor of Therapeutics in the Medical School, presented his interesting and stirring account of early medical education in Baltimore. The late Dr. A. J. Lomas was superintendent of the hospital and was proud of his new

hospital building and, before the Cordell Society, presented an engrossing paper on "As It Was In The Beginning." The Biological Society of the University of Maryland reported abstracts of papers presented before it in the BULLETIN. One reads with interest the exciting work that the late Dr. Edward Uhlenhuth was doing on the thyroid of the salamander and Dr. Hymen S. Rubenstein's interesting paper on Cerebellar Agensis.

The new drug, sulfanilamide, was discussed in an interesting paper by Dr. Harry S. Shelley, who delineated his experiences with sulfanilamide in the treatment of urethritis. The late Dr. Grant E. Ward and Dr. E. Eugene Covington presented an interesting discussion of Hodgkin's disease.

Although Rowland Day, honoring the late Dr. J. M. H. Rowland who was Dean of the Medical School, was held in 1936, the addresses given at the Rowland Day Banquet were published in the 1938 BULLETIN. They are interesting to read and showed the stature and sterling qualities of this distinguished former Dean of our Medical School. The late Dr. Maurice Pincoffs was Chairman of the Editorial Board of the BULLETIN and as Professor of Medicine his splendid physique graced the campus and strode through the corridors of the Hospital like Hector among the Trojans. In 1938 the BULLETIN records with lamentation the precipitous death of the distinguished Professor of Surgery, Dr. Frank S. Lynn, who died of a stroke,

while telephoning in the University Hospital.

One notes with interest that among the graduates of the Medical School Class of 1938 were many who were to achieve distinction in the field of medicine. To list only a few: Theodore E. Woodward, Stanley E. Bradley, Samuel L. Fox, and John A. Wagner. John M. Scott was President of this class.

The year 1938 was a momentous period in the world's history at large. Hitler had taken over the Sudetenland from Czechoslovakia and the world waited in sort of a poised night to see the outcome of the crisis. The tragedy at Munich and World War II followed in its wake. And all of the buoys that marked the channels through which our life flowed were to be washed away and a new course on uncharted seas lay ahead for medicine and the world which it serves.

1963 Pincoffs Lecturer Nominated

THE 1963 Maurice C. Pincoffs Memorial Lecture will be given by Dr. Julius H. Comroe, Director of Cardiovascular Research Institute, University of California. The lecture is scheduled for Thursday evening, December 12.

Dr. Lillehei, Eighteenth Phi Delta Epsilon Lecturer

THE ANNUAL Phi Delta Epsilon Lecture, featuring Dr. C. Walton Lillehei, Professor of Surgery, School of Medicine University of Minnesota, was held on Tuesday, March 12, 1963, at 8:30 p.m. in the Gordon Wilson Hall of the University Hospital. Dr. Lillehei spoke on the "Present Status of Cardiovascular Surgery."

Spanish Neurologist Visits Campus



DON ALBERTO PORTERA-SANCHEZ, Director of The Neurological Institute of Madrid, was a recent visitor to the Medical School campus. Dr. Portera presented to the Division of Neuropathology a bust of Don Santiago Ramon y Cajal. Shown above is Dr. Portera at the presentation ceremony.

Douglass Obstetric & Gynecological Society Meets

THE ANNUAL MEETING of the society named in honor of the late Dr. Louis H. Douglass, former Professor of Obstetrics at the Medical School, was held on Saturday morning, May 18. The program included: Dr. Herbert S. Kupperman, Associate Professor of Medicine at the New York University Postgraduate School, who spoke on "Endocrine Aspects of Infertility," and Dr. Abraham S. Velkoff of Emory University who spoke on "Surgical Aspects of Infertility." A panel discussion, led by Dr. Arthur L.

Haskins, concluded the morning program.

Papers in the afternoon were presented by Drs. T. Edgie Russell, C. R. A. Gilbert, Leslie A. Walker, George A. Hahn, Schuyler G. Kohl, and William F. Peterson. Discussants included Drs. Emerson Fackler, J. Tyler Baker, Clarence C. Briscoe, Benjamin H. Inloes, Jr., L. Louis Mould, and H. B. Perry, Jr.

The scientific program was arranged by Dr. D. Frank Kaltreider, Professor of Obstetrics. Officers of the society include Dr. Isadore A. Siegel, President; Dr. J. Tyler Baker, Vice President, and Dr. E. B. Middleton, Secretary-Treasurer.

Addendum

IN THE published bibliographies of the Faculty of the School of Medicine in the BULLETIN, April, 1963, p. v-xvi for the year 1961-62, the bibliography of the Department of Pharmacology was largely omitted. The BULLETIN regrets the error.

Publications, Department of Pharmacology 1961-62

BURGISON, RAYMOND M., LING, ALFRED S. L., RUDO, FRIEDA, and KRANTZ, JOHN C., JR.: Tetrahydroxyethylenediamine Tetranitrate as a Coronary Artery Dilator (THEN). *Toxicol. & Appl. Pharmacol.*, 4:1, 1962.

BURGISON, RAYMOND M., LU, GORDON G., COWLEY, R. ADAMS, and KRANTZ, JOHN C., JR.: Studies on a New Coronary Vasodilator, 1-Chloro-2, 3-Propanediol Dinitrate. *Angiology*, Vol. 13, 1962.

BURGISON, RAYMOND M., LU, GORDON G., BELL, FREDERICK K., and KRANTZ, JOHN C., JR.: Nitrites XX. Pharmacologic Studies with 1-Ethylglyceryl Trinitrate. 111:245, 1962.

HENSALA, JOHN C., BURGISON, RAYMOND M., and KRANTZ, JOHN C., JR.: The Pharmacologic Response to 8-Aminothephylline. *J. Pharmacol. & Exp. Ther.*, Vol. 131, Feb. 1961.

KRANTZ, JOHN C., JR.: The Choice of a Symptom-mimetic Amine. *Bull. School Med. Univ. Maryland*, 46:11, 1961.

KRANTZ, JOHN C., JR.: Aspirin Does It Again—Now Hypercholesterolemia. *Cur. Med. Digest*, Vol. 28, April 1961.

KRANTZ, JOHN C., JR.: At Long Last—Open Warfare Against the Population Explosion. *Cur. Med. Digest*, Vol. 28, May 1961.

KRANTZ, JOHN C., JR., CASCORBI, HELMUT F., HELRICHT, MARTIN, BURGISON, RAYMOND M., GOLD, MARTIN I., and RUDO, FRIEDA: A Note on the Intravenous Use of Anesthetic Emulsions in Animals and Man with Special Reference to Methoxyflurane. *Anesthesiology*, Vol. 22, May-June 1961.

KRANTZ, JOHN C., JR., CASCORBI, HELMUT F., and RUDO, FRIEDA G.: Anesthesia LXIV: The Intravenous Administration of Methoxyflurane (Penthane) Emulsions in Animals and Man. *Anesth. & Analg.*, Vol. 41, May-June 1962.

KRANTZ, JOHN C., JR.: Some Complications of the Anesthetic Syndrome. *Med. Times*, November 1962.

KRANTZ, JOHN C., JR., LU, GORDON G., BELL, FREDERICK K., and CASCORBI, HELMUT F.: Nitrites XIX. Studies of the Mechanism of Action of Glyceryl Trinitrate. *Biochem. Pharmacol.*, 11:1095, July 1962.

LING, ALFRED S. L., BELL, FREDERICK K., KRANTZ, JOHN C., JR.: Anesthesia LXII: The Effect of Hexafluorodiethyl Ether on Brain Cholinesterase Activity. *Anesthesiology*, Vol. 22, May-June 1961.

LU, GORDON G., FINGER, GLENN C., and KRANTZ, JOHN C., JR.: The Antipyretic Activity of Certain Fluorine-Substituted Benzpates. *Toxicol. & Appl. Pharmacol.*, 4:1, 1962.

TRUITT, EDWARD B., JR., CALLAWAY, ENOCH, BRAUDE, MONIQUE C., and KRANTZ, JOHN C., JR.: The Pharmacology of Myristicin—A Contribution to the Psychopharmacology of Nutmeg. *J. Neuropsychiat.*, Vol. 2, March-April 1961.

TRUITT, EDWARD B., JR., and EBERSBERGER, ETHEL M.: Decarboxylase Inhibitors Affect Convulsion Thresholds to Hexafluorodiethyl Ether. *Science*, 135:105, 1962.

TRUITT, EDWARD B., JR., DURITZ, GILBERT, MORGAN, ANN M., and PROUTY, RICHARD W.: Disulfirama-like Actions Produced by Hypoglycemic Sulfonyleurea Compounds. *Quart. J. Stud. Alcohol*, 23:197, 1962.

Faculty at Airlie House For Educational Seminar

MOTIVATED by a desire to gain a better understanding of the basic principles of teaching and learning as related to medical education in general and particularly to the current program at the School of Medicine, more than 40 members of the Senior Faculty met at Airlie House, Warrenton, Va., from June 17 through June 21.

By means of seminars and group discussions organized co-operatively by a joint faculty planning committee and a group from the Association of American Medical Colleges, the conference re-examined in detail such subjects as learning in medicine, motivation, grades and grading, the school environment, curriculum, and the educational process. Following each general presentation which was led by the A.A.M.C. staff, there were small group discussions. Notes on these sessions were made, to be ultimately transcribed and to form a basis for continuing re-examination and study.

For some months, a special committee has worked in co-operation with the Educational Department of the Association of American Medical Colleges developing the program and performing objective studies of faculty, school environment, and students. More than a dozen such studies were made, analyzed by the Statistical Department of the A.A.M.C., and presented for study by the conferences in the form of a Source Book. Coupled with the general discussions, the source book thus provided additional reference to the University of Maryland whereby current programs,

achievements, and attitudes could be viewed and compared with recognized general trends.

In addition, seminars on programmed teaching (teaching machines), grades and grading, experimental programs, and problems of the internship and residency were presented.

The program in detail included:

MONDAY MORNING—Introduction, followed by discussion. MONDAY AFTERNOON—Characteristics of Medical Students, followed by a discussion.

TUESDAY MORNING—Principles and Techniques of Evaluation, followed by a discussion. TUESDAY AFTERNOON—Principles and Techniques of Evaluation, followed by a discussion. TUESDAY EVENING—Electives: 1. Grades and Grading, 2. Teaching Machines and Programmed Instruction, 3. Experimental Programs, 4. Internships and Residency.

WEDNESDAY MORNING—Learning, followed by a discussion. WEDNESDAY AFTERNOON—Medical School Environment. WEDNESDAY EVENING—Electives: Same as Tuesday Evening.

THURSDAY MORNING—Curriculum, followed by a discussion. THURSDAY AFTERNOON—Instructional Techniques, followed by a discussion.

FRIDAY MORNING—The Educational Process, followed by a general discussion of objectives by the faculty.

Members of the Seminar Staff from the A.A.M.C. included Stephen Abrahamson, Ph.D., Director, Division of Research in Medical Education, University of Southern California School of

Medicine; Lawrence A. Fisher, Ph.D., Associate Director of Research in Medical Education, University of Illinois College of Medicine; George E. Miller, M.D., Director of Research in Medical Education, University of Illinois College of Medicine; and Paul J. Sanazaro, M.D., Director, Division of Education, Association of American Medical Colleges; and Drs. David Babbott, M.D., and Edwin B. Hutchins, Ph.D., who served as resource persons.

It is expected that the details of the conference, its conclusions, and recommendations will form a basis for assay and evaluation of present educational programs and for the orderly develop-

ment of future educational programs and policies of the School of Medicine. This data will be carried in a forthcoming edition of the BULLETIN.

Carefully planned, expertly conducted by a well prepared and knowledgeable staff of experts, the participation by faculty was most active and purposeful—and it is hoped, productive of valuable conclusions which will ultimately culminate in useful new pedagogic developments. Credit for the success of the conference goes to Dr. George Entwisle, Professor of Preventive Medicine and Rehabilitation and to his committee composed of Drs. Firminger, Storey, Mosberg, Blake, and Dean Stone.



Book Reviews

An Introduction to Diagnostic Enzymology.

J. H. Wilkinson. Pp. 288. The Williams & Wilkins Co., Baltimore, Md. 1962. \$9.00.

An excellent introduction and laboratory manual. It starts with a general survey into the nature and kinetics of enzyme action and continues to describe individual enzyme systems as they occur in different organs. Units of enzyme activity and individual assays are described and clinically significant reasons for these activities are listed. A short appendix details the commonly used methods for enzyme determinations. The discussion stresses, whenever deviations from normal activity levels occur, what is known about the causes of such deviations and emphasis is laid upon the influence of medications upon enzyme levels to guard the clinician against diagnostic errors. This reviewer feels that this book will be well accepted by the practitioner as well as the researcher.

MORITZ MICHAELIS, PH.D.

Aids to Surgery by Michael Harnes, M.A., M.B., B.Chir., F.R.C.S., and G. Maurice Lunn, M.A., M.Chir., F.R.C.S. Pp. 351, with appendix of normal laboratory values and multiple illustrative sketches in black and white. The Williams & Wilkins Co., Baltimore, U. S. agents for Ballière, Tindall and Cox, Great Britain. \$3.75.

This pocket-size, hard cover volume is basic, extremely concise, and laudable for its straightforward factual presentation. As the student "aid" to general surgery for which it is intended, it is probably one of the best I have read.

The graphs, sketches, and charts complementing the text are lucid as well as plentiful. Sections in this edition on fluid balance, burns, and chemotherapy are necessary and timely additions. An occasional English pharmaceutical trade name, weight, dose, or medical order, though not always familiar, are small,

if any, hindrance to the American student—generally being easily understood. One or two suggested methods of treatment may be dissimilar to a current one here, but this is not the rule in this volume which is an orderly, authoritative, current presentation for a basic surgical foundation.

The authors, then, have fulfilled their goal of continuing the tradition of the Student Aid Series, first started 60 years ago. Their adequate revisions and additions provide a small tome remarkable for its scope.

MARY C. BURCHELL, M.D.

Pulmonary Structure and Function.

Ciba Foundation Symposium. Ed. by A. V. S. de Reuck and Maeve O'Connor. 403 pp. Illustrated and indexed. Little, Brown, & Co., Boston, Mass. 1962. \$11.50.

The Ciba Foundation of London is an educational and scientific charity, founded in 1947, and is supported financially by the chemical and pharmaceutical firm of Ciba Ltd. in Basle, Switzerland. Each year Ciba Foundation is host to 5 or 6 international groups of scientists who meet informally from 2 to 4 days to exchange facts and ideas. The attendance at these symposia is purposely kept small in the vital interest of the intimate atmosphere necessary for the free and informal exchange of ideas. But the papers that are presented at these conferences and the full discussions are made available to all through the now familiar Symposium Volumes published in Britain by J. and A. Churchill Ltd. and by Little, Brown & Co., Boston.

This volume on Pulmonary Structure and Function presents the proceedings of the conference held in July, 1961 in the Ciba House at Portland Place, London. Twenty-nine authorities in the field of pulmonary anatomy and physiology were invited from Austria, Britain, Canada, France, Germany and the U. S. A. to consider what takes place in the pulmonary alveoli and the ways in which

normal pulmonary ventilation is disturbed by disease.

The recognition of the importance of close correlation of pulmonary anatomy and physiology is well expressed in the title of the symposium itself, and in the titles of the papers presented. Recent Advances in Pulmonary Anatomy (A. A. Liebow), Proprioceptive Control of Breathing (E. J. M. Campbell and J. B. L. Howell), The Glomus Pulmonale: Its Location and Microscopic Anatomy (V. E. Krah), Cellular Structure and Mucus Activity in the Bronchial Tree and Alveoli (H. von Hayek), Mechanics of Respiratory Structures (Jere Mead), The Human Lung: Microscopic Structure and Diffusion (C. G. Loosli and R. F. Baker), Some Remarks on the Submicroscopic Anatomy and Pathology of the Blood-Air Pathway in the Lung (H. Schulz), and Fixation of the Lung with Respect to Lung Volume and Air-Space Size (B. Heard) are papers which, in particular, relate structure and function. Problems of pulmonary ventilation and perfusion are considered in: Ventilation-Perfusion Relationship (H. Rahn and L. E. Farhi), Pulmonary Gas Exchange Measurements using Radioactive Gases (J. B. West et al.), Physiological and Biochemical Effects of Pulmonary Artery Occlusion (J. H. Comroe, Jr.), Gas Exchange Processes in the Pulmonary Capillaries (R. E. Forster et al.), Pulmonary Capillary Blood Flow and Gas Exchange (A. B. DuBois et al.), and Effect of Lung Inflation upon the Pulmonary Vascular Bed (R. L. Riley). Altered anatomy and physiology of diseased lungs is also considered in: Techniques used in the Study of Lung Pathology: The Anatomy of Emphysema (J. Gough and J. G. Leopold), The Degree of Variation of Blood Perfusion and of Ventilation within the Emphysematous Lung and some Related Considerations (W. A. Briscoe and A. Cournand), and Control of Respiration in Relation to Lung Pathology (J. E. Cotes).

The conferees, all authors of many papers and some of books on their particular subjects, have well documented their presentations with references to the pertinent literature. At least as important as the authoritative information presented are the problems raised by the participants both in their papers and in the lively discussions which followed.

This volume maintains the high standards characteristic of the Ciba Symposia and should serve to inform and to stimulate anatomists, physiologists, pathologists and clinicians for years to come.

J. A. W.

Aids to Zoology, 6th ed. R. E. Lister. Pp. 240. The Williams & Wilkins Co., Baltimore, Md., 1963.

This volume is a review syllabus of college-level general zoology and includes chapters on cell division, cell growth, and a summary of the principal classifications of living things. This is a very concise review book designed particularly as a refresher for those having once studied these subjects.

J. A. W.

Foundation of Anatomy and Physiology. Janet S. Ross and Kathleen J. W. Wilson. Pp. 451. Williams & Wilkins Co., Baltimore, Md., 1963. \$7.00.

This rather comprehensive, practical treatise by two prominent Scottish nursing sisters is a remarkably attractive volume. It seeks to portray an integrated, simplified concept of the gross and microscopic anatomy and the related functions of cells and organs in man. Designed primarily as a text for student nurses, its concise clarity and simplicity surmounts a difficult problem often encountered by high school and college instructors in the preliminary introduction of the science student to these subjects. Possibly, the authors do not recognize the value of their work as a potentially useful text in secondary and collegiate educational programs. The volume also might be useful to the intellectually curious, non-scientific person and to scientists in allied fields who seek a ready reference to broad and simplified aspects of human anatomy, histology, and physiology. The volume is basically complete and is beautifully illustrated with well-chosen diagrams and simplified drawings. It is presented in semi-outline form, is readily informative, properly indexed, and easily read. The volume should find acceptance not only in schools of nursing but in other educational areas where an accurate and general reference to the human body, its form and function is desired.

J. A. W.

ABSTRACTS of articles by faculty and alumni

Efflux of Chloride Ions during the Action Potential of Nitella—L. J. Mullins *Nature* 196:986, 1962

Single cells of *Nitella* were loaded with Cl^{36} for 30 days and were then stimulated at a frequency of 1 min. for 15 min. This treatment increased the rate constant for Cl^- efflux about 40-fold. Resting effluxes of about 10^{-12} mole Cl^-/cm^2 sec. were increased to the order of 10^{-9} mole Cl^-/cm^2 impulse or 1000 fold. The conclusion from these measurements is that Cl^- carries the current that depolarizes the cell during an action potential.

Giant Bullous Emphysema Occurring in Tuberculosis in Childhood—Milton B. Kress and A. H. Finkelstein *Pediatrics* 30:269, 1962

This is the third case to be reported of bullous emphysema occurring during the treatment of pulmonary tuberculous lesions in a child, and the first in which the diagnosis was confirmed by sputum positive for tubercle bacilli on smear and culture. The patient, a 20-month-old Negro female, was admitted to the hospital July 12, 1955, with right upper lobe consolidation with central cavitation. Treatment with INH and streptomycin for one year resulted in apparently arrested disease. On the second hospital admission in October, 1960, there was far advanced bilateral cavitory disease. The sputum was rapidly converted to negative on treatment with INH, streptomycin, and PAS. Extensive bullous lesions began to develop after three and one-half months of treatment. These bullae occupied more than 50% of the volume of each lung after eight months of treatment, but disappeared after 14 months. There remained, however, multilocular, thick-walled cavitation in both upper lobes and considerable fibrosis in the lower lobes. Long-term chemotherapy was considered the treatment of choice, since surgery was precluded by the reduced pulmonary function and the extent of the disease.

The formation of bullae is thought to be

due to a check-valve mechanism occurring during the healing of cavitory and exudative lesions, and occasionally from compensatory emphysema developing adjacent to tuberculous lesions. The infrequency of the adult type of lesions in childhood disease accounts for the rarity of bullous lesions developing in children.

Encephalitis Due to Group B, Type 5 Coxsackie Virus—Stuart H. Walker and Yashushi Togo *Amer. J. Dis. Children* 105:209, 1963

Severe encephalitis caused by infection with group B, type 5 Coxsackie virus is not limited to the newborn. Older children and probably adults also are susceptible to encephalitic manifestations consequent to the characteristic visceral disease. Positive diagnoses is based on recovery of virus from the feces and cerebrospinal fluid during the acute phase and upon a significant rise in homotypic neutralizing antibody titers during the period of convalescence.

The acute gastroenteritis of group B, type 5 Coxsackie virus infection in older children follows an unremarkable course until signs of aseptic meningitis are superimposed and evidence of acute diffuse encephalitis develops, usually within a few hours. Increased intracranial pressure is indicated by the appearance of papilledema and elevation of spinal fluid pressure. Consciousness is depressed, with evidence of multiple supranuclear deficits in cranial nerve function. Artificial respiratory techniques are required for prolonged periods of apnea caused by alterations in responsiveness of the respiratory center. Complete clearing of all cranial nerve derangements may appear to be consistent with bulbar poliomyelitis, but the primarily supranuclear involvement is more suggestive of widespread encephalitis. The two-day, severe course of the encephalitic manifestations is likewise not typical of infection with the poliomyelitis virus.

Encephalitic manifestations appeared in a 9-year-old boy on the sixth day of illness, having been preceded by acute gastroenteritis. Recovery was nearly complete by the eighth day of illness. Passageable agents isolated from

feces and cerebrospinal fluid were identified as Coxsackie virus, Group B, type 5, by neutralization with type-specific immune rabbit serum. Antibody titers of serum obtained on the sixth and 21st days of disease were 1:40 and 1:640, respectively.

The Respiratory Manifestations of Systemic Hemophilus Influenzae Infection

—Stuart H. Walker

J. Pediatr. 62:386, 1963

Systemic infection with *Hemophilus influenzae* is rare in children past the age of five years. Respiratory tract disease caused by the organism may result from primary invasion or altered host susceptibility which allows secondary invasion in damaged tissue. Isolation of the bacteria from blood or spinal fluid is proof of infection.

Culture of the organism from the upper respiratory tract is of little significance in determining cause of infection, since the organism is a common inhabitant of healthy respiratory tracts. Bacteremia with subsequent focalization may result in conjunctivitis, rhinitis, pharyngitis, otitis media, pneumonitis, or pleuritis. Most patients show signs of meningitis, including lethargy, vomiting, and seizures. The incidence of accompanying pharyngitis is 76%, otitis media 40%, and conjunctivitis 20%. Bronchitis and bronchiolitis occur infrequently with systemic infection and are usually associated with major interstitial and alveolar involvement.

Observations are based on the study of 45 patients with *Hemophilus influenzae* type b cultured from blood or spinal fluid.

Rabbit Fibroma Virus Plaque Assay and *in vitro* Studies—John E. Verna and

Ollie R. Eylar

Virology 18:266, 1962

Rabbit fibroma virus was shown to cause consistent destruction in primary and established rabbit cell cultures under our experimental conditions. Virus adsorption and multiplication in cell monolayers resulted in formation of plaques 1-2 mm. in diameter on the fourth to fifth day, under an overlay consisting of liquid growth medium. There was a linear relation between relative virus concentration and average plaque counts. Approximately

90% of the virus was adsorbed in 2½ to 3 hours at 37°. Virus titers determined by *in vitro* assay were comparable with titers obtained by rabbit inoculation. Preliminary investigations showed that although sera from some rabbits and from other animal species contained a virus-neutralizing factor, this factor did not inhibit plaque formation. The composition of the nutritional medium used for growth and maintenance of cells and for overlay medium for plaque measurement influenced the number of plaques obtained.

Immunological Studies with Group B Arthropod-borne Viruses. III. Response of Human Subjects to Revaccination with 17D Strain Yellow Fever Vaccine

—C. L. Wisseman, Jr., and B. H. Sweet

Amer. J. Trop. Med. & Hyg. 11:570, 1962

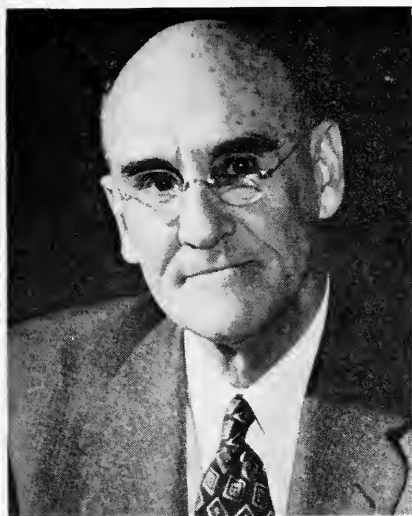
Eleven human subjects were revaccinated with a large dose (10^{6.1} suckling mouse i.e. LD₅₀) of the living attenuated 17D strain yellow-fever virus about 14 months after primary vaccination with this agent. None had evidence of experience with any Group B arbor virus prior to the primary vaccination.

Viremia was not detected in any volunteer in blood samples drawn between the fourth and seventh post vaccination days. The same technique had yielded positive virus isolates in six of 11 volunteers during a comparable period following primary vaccination.

Each revaccinated volunteer responded with a rise in yellow-fever neutralizing antibody titer. Three weeks after revaccination the titer had risen, on the average, 4.7-fold over the prevaccination titer.

The second exposure to the 17D virus through the revaccination procedure of human subjects whose only previous experience with Group B viral agents had been the primary yellow-fever vaccination yielded again neutralizing antibodies highly specific for the YF virus. As after the primary vaccination, heterologous neutralizing antibodies were not detected for the West Nile virus or for types 1 and 2 dengue viruses. This observation stands in sharp contrast to previous observations on heterologous antibody production following yellow fever vaccination of human subjects possessing naturally acquired prevaccination Japanese encephalitis virus neutralizing antibodies.

Obituaries



H. Boyd Wylie

1887-1963

DR. H. BOYD WYLIE, formerly the dean of the School of Medicine, died on May 15, 1963. Dr. Wylie was born in Baltimore on May 3, 1887, and educated in its public schools. He received his pre-medical training in the Johns Hopkins University, 1905 to 1908. He received his M.D. degree from the Baltimore Medical College in 1912. In 1913 this school became a part of the School of Medicine of the University of Maryland.

The young physician had a penchant for teaching and began immediately the teaching career as Associate in biological chemistry and pharmacology. This teaching career was destined to extend over four decades and involve approximately 5,000 medical students.

Dr. Wylie's teaching and administrative abilities were soon recognized and in that critical period of the history of the medical school, during World War

I, he was appointed head of the department of biological chemistry. He placed the department on a firm teaching basis and expanded its research and library facilities. Dr. Wylie took time from his administrative duties to engage personally in research. His special field of interest was the urinary excretion of phenols. For many years Dr. Wylie gave most of the lectures in the course. These lectures were characterized by exactitude and untiring attention to important details. This was characteristic of Dr. Wylie. As department head, he took a special interest in the welfare of the students and always encouraged personally those students who showed a special aptitude for biochemistry. His interest in the character and training of students entering the school was recognized by Dean J. M. H. Rowland who, in the late thirties, appointed the first admissions committee of the school, with Dr. Wylie as its chairman. He gladly added this important responsibility to his other duties and served in this capacity, with distinction, for more than two decades. In the capacity of chairman of the admissions committee, Dr. Wylie exercised the same care and meticulousness in the selection of students that was characteristic of him as a teacher. His efforts served to elevate the scholastic level of students entering the school and his work were praised most highly by Dr. H. C. Byrd, former president of the university.

President Byrd appointed Dr. Wylie acting dean upon the retirement of Dr. Rowland in 1940. For several years he served as assistant dean under Dr. Robert P. Patterson. Upon the retirement of

Dr. Patterson, Dr. Wylie became acting dean and, in 1948, dean of the faculty.

Dr. Wylie served the school as dean during many difficult years of transition. He materially assisted the planning committee in 1946 to obtain an increase of state support from approximately \$56,000 to \$350,000. He witnessed and encouraged the ever-increasing support of the research programs of the school from the National Institutes of Health. As the programs of teaching and research expanded, Dr. Wylie endeavored to encompass every detail of administration with fine scrutiny. This was so characteristic of the man. In 1955 he retired and was appointed dean emeritus by President Elkins.

During his active years, Dr. Wylie's chief outside interest was in church work. He served as vestryman of the Memorial Episcopal Church.

Dr. Wylie is survived by his wife, Mrs. Nina L. Wylie; a son, H. Boyd Wylie, Jr., of Baltimore; a daughter, Mrs. Herbert Reedy, of Lutherville, and four grandchildren.

For more than two score years Dr. H. Boyd Wylie served his alma mater. His devotion to duty, his loyalty, his friendliness, and his indefatigable devotion to elevating the standards of the school have made a lasting imprint upon thousands of students and contributed to the splendid position that the school now enjoys. We who knew him mourn his passing, but he was a Christian gentleman, and we are consoled by the belief, that somewhere beyond the morning cloud, in the infinite azure of the heavens, his spirit marches on, asserting with St. Paul, "I have fought a good fight, I have finished my course, I have kept the faith."

JOHN C. KRANTZ, JR.



Harry M. Robinson, Sr.
1885-1963

HARRY M. ROBINSON, SR., Emeritus Professor of Dermatology, died on March 17, 1963. He was 78.

A native of Cincinnati and New York City, he was a graduate of New York University prior to coming to Baltimore for his medical education.

Following his graduation, he undertook postgraduate work at Johns Hopkins School of Medicine and in 1912 joined its staff.

Dr. Robinson was for many years Professor of Dermatology in the School of Medicine and was active in organizing his department. He contributed many important papers to the dermatologic literature, including a textbook for student use and several volumes of poetry, a hobby.

Dr. Robinson was active in clinical dermatology for many years and served on the staffs of nearly all of the Baltimore hospitals. In 1955 he retired be-

cause of age, but continued his private practice at 106 E. Chase St.

He is survived by his wife, Mrs. Mary V. Ryan Robinson, and two sons by a former marriage, Dr. Harry M. Robinson, Jr. and Dr. Raymond C. V. Robinson, both of Baltimore.



Leon Ginsburg, M.D.

1897-1963

LEON GINSBURG, a kind, beloved, capable Baltimore dermatologist, died of myocardial infarction January 5, 1963.

Born in Baltimore on December 24, 1897, he attended the public schools and graduated from the Baltimore City College in 1915. He entered the University of Maryland School of Medicine and was graduated in 1920. After an internship at Sinai Hospital and training in psychiatry for two years, he took post-graduate training in dermatology in Vienna and Paris in 1924 and 1925. He returned to Baltimore to enter private practice and became chief dermatologist at the Sinai Hospital and at Levindale. He became Assistant Professor of Dermatology at the Medical School of Johns

Hopkins University. He was a member of the Baltimore City Medical Society, the American Medical Association, the Southern Medical Association, the American Academy of Dermatology, and the Baltimore Dermatologic Society.

In 1932 he married Hilda Kaufmann, and their son Robert was born September 19, 1936.

Leon was a gentle man who had a keen sense of humor and a kind understanding of human frailty, a combination which, together with his excellent knowledge of dermatology, made him a capable physician. He loved young people and enjoyed philosophical discussions with them about art, books, world affairs, medicine, and many other topics.

He enjoyed teaching medical students and nurses. One of his hobbies was the collection of art applied to dermatology. Some of his material was exhibited at the 12th International Congress of Dermatology. In spite of his vast knowledge, he was modest about his capabilities and did not strive for honors or recognition.

He believed, like the prophet of old, that what was required of him was "to do justice, show mercy and walk humbly with thy God."

HARRY M. ROBINSON, JR., M.D. and
FRANCIS A. ELLIS, M.D.

Carroll G. Warner

1903-1963

DR. CARROLL GARDNER WARNER died at Mercy Hospital, Baltimore, on January 24, 1963. He will always remain in the hearts of those who knew him. Gard was born in Westminster, Md., in 1903, the son of the Reverend Luther F. Warner and Susan Gardner Warner. His preliminary education was in the public schools of Westminster and Bal-

timore. He was graduated from Western Maryland College in the Class of 1924 and from the University of Maryland School of Medicine in 1928. After an internship at the University Hospital, he joined the Department of Pathology as a member of the staff. He was successively promoted to the rank of Associate Professor, serving until 1947, when he resigned to become Chief Pathologist of the Baltimore City Hospitals. During his tenure he completely reorganized the department and was responsible for the design of the new pathology laboratories presently located in the Tuberculosis Building. In 1952 he became Pathologist-in-Chief at the Mercy Hospital, a post he held at the time of his death.

Doctor Warner was an excellent, authoritative, knowledgeable, and reliable surgical pathologist. He excelled in his profession and was a friend to every physician and student of medicine.

He was an active member of St. John's Methodist Church, where he was a lay leader, member of the choir, and was active in many philanthropic projects within the church. Dignity, friendliness,

extreme generosity, loyalty, and godliness were but a few of his characteristics.

His interests and hobbies were numerous. He was an active alumnus of Western Maryland College, was a patron of the fine arts and in his own spare time was an amateur artist. Many of his friends are proud of pictures painted for them by him.

He was a member of the American Medical Association, a Fellow of the College of American Pathologists, a Fellow of the American Society of Clinical Pathologists and was a member of the American Board of Pathology, being certified in 1938. He was active as a member of the Medical and Chirurgical Faculty of Maryland and the Maryland Society of Pathologists. "Gard" had a warm personality, a quiet sincerity, and the ability to create friendship out of an acquaintance. He gave completely of himself and asked nothing in return. He is survived by his wife, Mrs. Colgate Parks Warner; a son, the Reverend C. Gardner Warner, Jr.; a daughter, Mrs. David Heese; and six grandchildren. Medicine has lost a truly noble man.

ROBERT E. ENSOR, M.D.

Competent experienced surgical fitters in attendance



*Serving the medical profession
for over a third of a century*

Equipment and Supplies for the

HOSPITAL	PHYSICIAN
LABORATORY	SURGEON
INDUSTRY	NURSE

Murray Baumgartner

SURGICAL INSTRUMENT CO., INC.

1121 MARYLAND AVENUE • BALTIMORE 1, MD.

SARATOGA 7-7333

POSTGRADUATE COMMITTEE SECTION

PATRICK B. STOREY, M.D., *Chairman and Director*

ELIZABETH B. CARROLL, *Executive Secretary*

Postgraduate Office: Room 201

Davidge Hall, 522 West Lombard Street, Baltimore 1, Maryland

The University of Maryland has continued to participate actively in postgraduate or continuing medical education for physicians in practice in the State of Maryland. During the current academic year, the following courses were given:

Basic Electrocardiography

This course was given November 15, 16, 17, 1962, for the third time under the direction of Dr. Leonard Scherlis. It was attended by 33 physicians. In the past three years 95 physicians have taken this course. It is our feeling that this represents a really worthwhile contribution to the postgraduate educational program here in Maryland. The reaction of the participating physicians has been just as enthusiastic this year as in the past.

Participating faculty were Drs. Leonard Scherlis, Donald Dembo, Luis Gonzalez, Yu Chen Lee, Sidney Scherlis, Robert T. Singleton, Kyle Y. Swisher and Theodore E. Woodward.

Advances in Medicine

This 2-day session was given on November 29, 30, 1962, at the Washington County Hospital in Hagerstown in collaboration with the Washington County Hospital Medical Staff. Thirty-seven physicians registered for this course. There were 22 from the Hagerstown area, three from Baltimore, two from

Frederick, three from the District of Columbia, one from Pennsylvania, two from Cumberland, one from La Plata, one from Queenstown and two from Montgomery County. The course was given at Hagerstown in order to facilitate participation by physicians from the western part of the state. This course will be offered again next year, but we will utilize one day of each week for two consecutive weeks instead of two consecutive days.

The participating faculty in this course were Drs. Francis J. Borges, John M. Dennis, Frank H. J. Figge, Milton S. Sacks, Leonard Scherlis, Charles E. Shaw, Robert T. Singleton, Vernon M. Smith, Carroll L. Spurling, Charles Van Buskirk, Donald A. Wolfel, Joseph B. Workman and John D. Young.

Neuropathology for Pathologists

This 6-day course was given on December 3-8, 1962, under the direction of Dr. John A. Wagner. It was our original intent to enroll only 12 students, but because of the heavy response Dr. Wagner managed to take 18. We were forced to reject eight other qualified applicants. This course was limited to Board Certified or Board Eligible pathologists who came from Ohio, Pennsylvania, West Virginia, Kentucky, Colorado, Texas, Indiana, Iowa, New Jersey, New York, and Illinois. The hours of this intensive

course ran from 9 o'clock each morning until 9 o'clock at night for five consecutive days and from 8 o'clock until noon of the sixth day. This course will be offered again next year. Participating University of Maryland faculty members were Drs. James G. Arnold, John M. Dennis, Harlan I. Firminger, Russell S. Fisher, Richard Lindenberg, Jerome K. Merlis, Peter Rasmussen, Robert B. Schultz, Charles Van Buskirk, John A. Wagner, and Howard M. Wisotskey. Guest speakers were Drs. William Blackwood of National Hospital, London, England (by transcription); John K. Frost of The Johns Hopkins Hospital; John Moossy of Louisiana State University School of Medicine; G. Allen Moulton of the National Institute of Neurological Diseases and Blindness.

Industrial Medicine

There were 34 registrants for this 1-day session December 13, 1962, on "The Cardiac in Industry." Representatives came from the American Can Company, Maryland Glass Corporation, Maryland State Health Department, Hamm Brewing Company, McCormick Company, Four Roses Distributing Company, Chevrolet Assembly Plant, Division of Employment Security of the Hercules Powder Company, Maryland National Bank, Baltimore Transit Company, Emerson Drug Company, Carr Lowry Glass Company, Koester's Bakery, General Chemical Company, Liberty Mutual Insurance Company, New Amsterdam Casualty Company, Baltimore and Ohio Railroad, U. S. Government Printing Office, Thiokol Chemical Company, Fort Dietrich Biological Laboratories, U.S.P.H.S. Hospital, and the Division of Occupational Health of the U. S. Public Health Service.

The program, which was designed to be of interest to physicians, nurses, industrial hygienists, safety engineers and plant managers, was under the direction of Dr. Walter E. Fleischer, Medical Director of Armco Steel Corporation.

Participants from the faculty of the University of Maryland were Drs. Francis J. Borges, Leonard Scherlis, Mrs. Shirley Buttrick, Professor L. Whiting Farinholt. Guest speakers were Miss Katharine A. Lembright, Nursing Consultant, American Heart Association, Dr. Lewis H. Bronstein, Director of the Cardiac Work Classification Unit, Beekman Downtown Hospital, New York City, Mr. Daniel T. Doherty, Chairman of the Workmen's Compensation Commission of the State of Maryland, Dr. Robert Yanover, Chairman of the Medical Advisory Board, Human Resources Foundation, New York City, and Dr. Fleischer.

Advances in Medical Science

This course was given in two-hour sessions on twelve consecutive Wednesday afternoons from January 9 to March 27, 1963. Forty-two physicians registered for the course which was divided into five parts: 1) Advances in Diagnostic Methods, 2) Advances in Therapeutics, 3) Advances in Cardiovascular Surgery, 4) The Current Status of the Malignancies, and 5) New Aspects of Old Diseases.

The members of the faculty who participated in this course were Drs. Emil Blair, Fernando G. Bloedorn, Francis J. Borges, R. Adams Cowley, Wm. G. Esmond, Frank H. J. Figge, Thomas C. Flotte, Richard B. Hornick, C. Ronald Koons, Fred R. McCrumb, Jerome K. Merlis, Wm. Keith Morgan, Howard Raskin, Milton S. Sacks, Leonard Scher-

lis, Adalbert F. Schubart, Charles E. Shaw, Robert T. Singleton, Vernon M. Smith, William S. Spicer, Carroll L. Spurling, Patrick B. Storey, John G. Wiswell, Donald A. Wolfel, Joseph B. Workman, and John D. Young.

This course will be offered again next year.

Clinical Anatomy

This course is given each year under the direction of Dr. Otto C. Brantigan (February 4 through May 27, 1963). There were 16 registrants this year. We had planned to limit registration to 15 students but were able to accommodate one extra. This course is directed towards both the medical man and the surgeon. It is an aid in preparation for the American Board examinations and emphasizes the practical application of Anatomy and anatomical principles in physical and x-ray diagnosis.

Members of the faculty who participated in this course were Dr. Otto C. Brantigan, Dr. Raymond M. Atkins, Dr. Harry C. Bowie, Dr. Robert E. Martin, Dr. Ross Z. Pierpont, Dr. Herbert E. Reifschneider, Dr. William B. Settle, Dr. Wallace W. Walker.

Practical Dermatology

This Day in Dermatology was given on February 7, 1963, under the direction of Dr. Harry M. Robinson, Jr. There were 37 physicians registered. The morning session was held in the Dermatology Clinic and was devoted to the examination of patients with dermatologic disorders. The afternoon was devoted to didactic presentations of a large number of dermatologic entities. This session was held in the Baltimore Union.

The faculty members who participated in the course were Drs. Harry M. Robin-

son, Jr., Eugene S. Bereston, Mark B. Hollander, William Dunseath, Joan Raskin, R. C. V. Robinson, Albert Shapiro, John F. Strahan and Stanley Yaffe.

Gynecology Day

This session on February 21, 1963, was devoted to the practical problems encountered in the office and clinic in the care of the gynecological patient, and was under the direction of Dr. Edmund B. Middleton. There were 38 physicians registered. The subjects covered included Detection of Pelvic Malignancy, Endocrine Diagnosis Without Major Laboratory Facilities, The Most Persistent and Troublesome Office Complaints, Reasonable Uses of Steroids in Office Practice, Management of Infertile Couples, and Pediatric Gynecology.

The participating faculty members were Drs. Everett S. Diggs, Edmund B. Middleton, Erica Moszkowski, Richard S. Mumford, and Umberto Villa Santa. The corollary of this course (Obstetrics Day) will be offered next year.

Surgical Physiology

This day, April 15, 1963, was under the direction of Dr. Arlie R. Mansberger, Jr., and was attended by 24 physicians, 22 of whom were general surgeons. The subjects covered were The Rationale of Medical and Surgical Management of Peptic Ulcer; The Pathophysiology of Intestinal Obstruction—Its Relationship to Diagnosis and Treatment; Peripheral Vascular Pathophysiology—A Guide to Clinical Management; The Physiologic and Pharmacologic Action of Anticoagulants in Relation to Their Use in Peripheral Vascular Disease—(Coumadin derivatives, Heparin and Dextran); Rationale for the Use of Hypothermia in the Clinical Management of Septic

Shock; and Bacterial Defense Mechanisms in Human Beings in Shock—Therapeutic Implications.

The participating faculty were Dr. Robert W. Buxton who was the moderator for the day, Drs. Emil Blair, Everard F. Cox, C. Thomas Flotte, Robert M. Olladart, and Dr. Mansberger.

Pediatric Seminar

Pediatrics Day was given on March 31, 1963, under the direction of Dr. J. Edmund Bradley. Participating faculty members in this program were Drs. Bradley, Ray Hepner, D. Frank Kaltreider, Harry M. Robinson, Jr., and Stuart H. Walker. Guest speakers were Dr. Carroll F. Burgoon, Jr., of Temple University School of Medicine; Dr. Heinz F. Eichenwald of Cornell University Medical College; Dr. Edward H. Kass of Harvard Medical School; Dr. William A. Silverman of Columbia University.

Other Postgraduate Educational Activity

As in previous years, another aspect of our postgraduate medical education program involves visits of our faculty to other hospitals in the state of Maryland:

1. *Frederick, Maryland.* We have completed our fourth successive year in the postgraduate program at the Frederick Memorial Hospital. The organization and the interest of the medical staff of this hospital remain a prototype for the smaller community hospital. Their Postgraduate Education Committee this year was under the Chairmanship of Dr. Fred Heldrich. We modified our approach in this series and adopted the principle of going more deeply into one particular field of medicine. Six monthly presentations were given on the general subject of cardio-respiratory disease with

emphasis on the basic science aspects involved. The participants in this activity were Drs. Donald Dembo, Leonard Scherlis, Wm. S. Spicer, Patrick B. Storey and Karl Weaver. A second subject approached during the year was in the field of dermatology. This was accomplished under the direction of Dr. Harry M. Robinson, Jr. Again, a basic approach to problems of dermatology was emphasized.

Participating in these sessions were Drs. William Dunseath, Joan Raskin and Harry M. Robinson, Jr.

2. *Hagerstown, Maryland.* The monthly meetings previously held at the Washington County Hospital were replaced this year by the 2-day course at Hagerstown. It is likely that we will continue to observe this formula, slightly modified, in the coming year.

3. *Westminster, Maryland.* A series of monthly meetings was begun at the Westminster General Hospital in January, 1963. The theme of these meetings was "Advances in Diagnostic Methods."

Participating in the program were Drs. Howard Raskin, Robert Singleton, Carroll Spurling, Donald Wolfel and Joseph Workman.

4. *Easton, Maryland.* Monthly visits were made by faculty members of the Department of Obstetrics and Gynecology to the Easton Memorial Hospital. Those participating in this program were Drs. Harry Cohen, Vincent Fitzpatrick, William Gentry, Arthur Haskins, Edmund Middleton, Richard Munford, Herbert Nasdor, Jose Valderas, and Umberto Villa Santa.

5. *Salisbury, Maryland.* Monthly visits to the Peninsula General Hospital were made by members of the faculty of the Department of Obstetrics and Gynecology.

MEDICAL SCHOOL SECTION

Those participating in this program were Drs. Wm. D. Gentry, Hugh B. McNally, Earle M. Wilder, Joseph T. Michels, Everett S. Diggs, Richard S. Munford, King Seeger, Herbert Nasdor, Umberto Villa Santa, Walter James and Edward B. Middleton.

Exclusive of the Pediatrics Seminar, and not counting the programs away from home, there were 275 physicians who participated in postgraduate courses this year. The 1-day session appeared to be quite popular, and we plan to use this approach more frequently in our program design.

The courses scheduled for next year and their dates are as follows:

Gastroenterology October 16, 1963
Clinical Cardiology November 14-16, 1963

Advances in Medicine

(Hagerstown) November 20, 1963
and December 4, 1963

Neuropathology for

Pathologists December 2-7, 1963

Industrial

Medicine December 11, 1963

Advances in Medical Science

January 9 to March 26, 1964

Surgical Physiology January 22, 1964

Dermatology February 5, 1964

Clinical Anatomy

February 5, 1964 to May 27, 1964

Obstetrics February 19, 1964

Diabetes March 11, 1964

Hematology

March 18 and 25, 1964

Have you paid your dues?

**Your Medical Alumni Association exists solely upon
dues payments from its members.**

It needs your support!

**Any suggestions for the improvement of your
Association are always welcome.**



OFFICERS

President

GEORGE H. YEAGER, M.D.

President-Elect

GIBSON J. WELLS, M.D.

Vice-Presidents

WYLIE M. FAW, JR., M.D.

PHILIP A. INSLEY, M.D.

HUGH W. WARD, M.D.

Secretary

FRANCIS J. BORGES, M.D.

Treasurer

HOWARD B. MAYS, M.D.

Executive Director

WILLIAM H. TRIPLETT, M.D.

Executive Secretary

MRS. LOUISE GIRKIN

Board of Directors

EDWARD F. COTTER, M.D.

LAWRENCE M. SERRA, M.D.

RAMSEY B. THOMAS, M.D.

THEODORE E. WOODWARD, M.D.

F. FORD LOKER, M.D.

NATHAN E. NEEDLE, M.D.

HOAROLD P. RIEHL, M.D.

RENNERT M. SMELSER, M.D.

JOSEPH D'ANTONIO, M.D.

FRANK K. MORRIS, M.D.

(*ex-officio*)

ARTHUR G. SIWINSKI, M.D.

(*ex-officio*)

Nominating Committee

ARTHUR G. SIWINSKI, M.D.

FRANK K. MORRIS, M.D.

PATRICK PHELAN, M.D.

AARON C. SOLLOD, M.D.

J. KING B. E. SEEGAR, M.D.

Representatives to General Alumni Council

ARTHUR G. SIWINSKI, M.D.

FRANK K. MORRIS, M.D.

WILLIAM H. TRIPLETT, M.D.

Representatives, Editorial Board, Bulletin

JOHN HORNBAKER, M.D.

HARRY M. ROBINSON, JR., M.D.

JOHN E. SAVAGE, M.D.

C. VERNON WILLIAMSON, M.D.

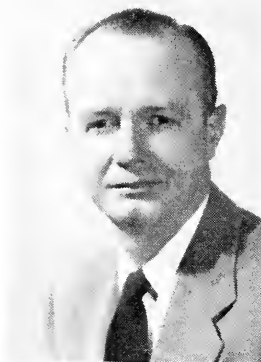
GEORGE H. YEAGER, M.D.

(*ex-officio*)

Representatives, Advisory Board, Faculty

FRANK K. MORRIS, M.D.

ARTHUR G. SIWINSKI, M.D.



ALUMNI ASSOCIATION

SECTION

President's Letter

Dear Fellow Alumni:

Medical Alumni Days of the future show promise of being more educationally stimulating, as well as more socially attractive than those of the past. Exercises held this June may well represent the passing of an era.

The tradition of coordinating Medical Alumni Day with the University graduation exercises in June will be changed to a selected date in May (May 7-9, 1964).

The Medical Alumni, as an association, has been a target of criticism for adhering to a June date. Many alumni have conflicts. Some find it difficult to attend because their children may require their attendance at other exercises. Others complain of interference with professional meetings or with vacation plans.

Faculty members have complained that, because of additional June commitments, attendance at Medical Alumni exercises is precluded. Others complain that there are too many activities crowded into one week, e.g., pre-commencement exercises on the Baltimore campus and commencement exercises at College Park.

"Specialty groups" that now exist in the medical environment of the Baltimore campus have expressed a willingness to lend their support to this new "Medical Alumni" effort. Medicine, Obstetrics and Gynecology, Pediatrics, and Surgery will be represented on the scientific program. Ample opportunity will be afforded returning alumni to attend and participate in any phase of the program that is personally appealing.

The Alumni banquet will be held as usual with the graduating class as guests. Class reunions will be held as usual.

It is believed that the contemplated changes will strengthen, enlarge, and enhance our Medical Alumni.

GEORGE H. YEAGER, M.D.
President

June Week at the Medical School

JUNE WEEK began on Thursday, June 6, with Alumni Day activities. First there was registration on the first floor of Davidge Hall, which was followed by the scientific session in Chemical Hall. Dr. John M. Scott of the Class of 1938 was Moderator. The program included the following:

1. A QUARTER CENTURY OF MERCURIAL DIURETIC THERAPY by Aaron Feder, M.D., member of the Class of 1938, and Clinical Associate Professor of Medicine, Cornell University, College of Medicine, New York City.

2. TRENDS OF TEACHING IN EDUCATION AND RESEARCH by Stanley Bradley, M.D., Class of 1938, Professor and Head of Department of Medicine, Columbia University, New York City.

3. INTERESTING MEDICAL LEGAL PROBLEMS OF THE CENTRAL NERVOUS SYSTEM by John A. Wagner, M.D., Class of 1938, Professor of Neuropathology and Head, Division of Neuropathology, University of Maryland School of Medicine, Baltimore.

4. UNILATERAL RENAL DISEASE IN HYPERTENSION by John J. Bunting, M.D., Class of 1938, Lecturer in Medicine at the University of Texas and Associate Professor of Clinical Medicine, Baylor University College of Medicine, Houston, Texas.

Following the scientific program, Dr. George H. Yeager, President of the Medical Alumni Association, presented the annual Alumni Honor Award for outstanding contributions in medicine and for distinguished service to mankind

to Dr. Louis A. M. Krause, Class of 1917. Dr. Krause responded briefly and eloquently as an expression of appreciation for the award.

The annual business meeting then followed. The minutes of this meeting will be published in a subsequent issue of the BULLETIN. Dr. Howard B. Mays, Treasurer, read the financial report. This will be published also in a subsequent issue.

Dr. William H. Triplett, Executive Director of the Medical Alumni Association, then presented his annual report, which was followed by the customary Necrology Report, containing 118 names for the year 1962-63. Both reports follow.

Report of Executive Director

I am bold enough to state that any alumnus who had occasion to visit the Alumni office located on the floor above, on any workday during the past year, received courteous attention and in most cases the information sought was available and forthcoming.

The same applies to services rendered via telephone. If our telephone had been monitored through the year, I am confident the number of calls would have been astounding.

The greatest difficulty encountered in our office will be found generously distributed through the files. The system, although antiquated, bears all the current information we are able to collect. Pertinent data is recorded as received; there is neither lost motion nor delay. Only experience in dealing with our files would be convincing that we have so many peripatetic alumni—and they seldom, if ever, notify our office when changing address, and yet we have records of upward of 1,300 changes of address having been made during the year.

We must depend almost entirely upon the report of Deaths published in the *J.A.M.A.* for our Necrology roster. We know that many,

many death notices never reach the Journal. As a consequence we are constantly being embarrassed and financially hurt paying return postage on mailing pieces addressed to the deceased.

No effort is ever lost to publicize our Student Loan Fund. As alumni representative on the Dean's Committee on Scholarships and Loans, I am familiar with the position of helpfulness and value this Fund occupies. I have no hesitancy in urging support for this unselfish enterprise. Every dollar contributed will earn rewarding dividends—dividends measured only by that inward sense of satisfaction a good deed always arouses.

I am pleased to report that we enjoy a warm relationship with the school administration. We receive full cooperation from the Dean's office and the same applies to pertinent departments located at College Park. That relationship has prompted the embracement of a program devoted to the development of a Curriculum Vitae on every alumnus. This will be a problem of great proportions, one which will no doubt be characterized by unusual delays, errors, and omissions, but which will none the less receive dedicated and continuing attention.

It must be realized that we are indebted to the school administration for the office space we occupy in this building. I am confident all alumni are grateful for the privileges extended, but I feel impelled to state we are handicapped, especially so in this space age. I strongly recommend that our Board be encouraged to begin thinking seriously in terms of providing better facilities.

In closing this brief and sketchy report, I should like all Alumni to take renewed interest in the welfare of the Association to the end that all activities will be evaluated and those worth while be supported and all others, through the same interest, be eliminated. Especially give attention to supplying any and all news relating to individual alumni; our BULLETIN needs and merits that support.

WILLIAM H. TRIPLETT, M.D.
Executive Director

June 6, 1963.

NECROLOGY 1963

ARIHART, GEORGE A.	BMC 1910
ABELL, ROBERT E.	1912
ADAMS, EDGAR PAUL	1919
AGNELLI, SAVERIO	BMC 1905
BEERS, REID L.	1936
BYERS, ASHBY C.	1901
BATES, JAMES H.	1907
BIDDLE, BENJAMIN H.	1916
BATTLE, GEORGE C.	1912
BOWEN, JOSEPH J.	1941
BATTAGLIA, DOMINIC	1935
BILLINGSLEA, JAMES	1905
BYERLY, WILLIAM L.	1911
BELSKY, HYMAN	1927
BENNETT, GEORGE E.	1909
BAKER, H. L.	BMC 1892
BUENOI, JOSEPH F.	P&S 1898
BROSEMER, LOWELL R.	1946
BUFFALO, J. S.	BMC 1900
BAER, JACOB A.	P&S 1901
CLARK, HUGH E.	1914
COGGINS, JESSE	P&S 1896
CONBOY, MICHAEL A.	P&S 1901
CASO, JOSE	1925
CAHN, MORRIS L.	1910
CASHWELL, ROY L.	1931
COWAN, THOMAS W.	1955
COLLARD, JAMES L.	BMC 1908
DANN, ALPHEUS E.	1904
DAVIES, JOHN OLIVER	1898
DAVIS, EDGAR BROWN	1904
DODRILL, JAMES B.	P&S 1909
DODSON, RICHARD C.	1911
DORSEY, BENJAMIN H.	1901
ELEDER, FRANKLIN CHARLES	1917
ELY, LANCELOT	P&S 1904
FISHER, ROBERT W.	1903
FOSTER, WILLIAM S.	P&S 1891
FUERTES, JOSE R.	1942
GILLS, ANDREW C.	1904
GINSBERG, LEON	1920
GORDEN, ABEL	1926
GORENBERG, HAROLD	1932
GOULD, NATHANIEL J.	1913
HAHN, ALBERT G.	1916
HARTWIG, CHARLES W.	1889
HOLLYDAY, WILLIAM W.	1908
HUGHES, JAMES A.	1909
HUSTED, SAMUEL HARLEY	1929
JOHNSON, LEONARD B.	1892
JOHNSON, LUCIAN D.	P&S 1912
KEEGAN, DANIEL F.	1921
KELLEY, ROBERT E. S.	P&S 1911

ALUMNI ASSOCIATION SECTION

KEMLER, JOSEPH I.	1907	WARNER, CARROLL GARNER	1928
KETTLE, WALTER W.	1909	WELLS, DANIEL H.	1940
KING, SAMUEL J.	1903	WILLETTS, JOSEPH E.	1881
KNOTTS, E. PAUL	1920	WILSON, JAMES EDWARD	P&S 1912
LAWSON, ROBERT BAKER	1902	WIDEMEYER, ROBERT S.	1925
LEDBURY, JOHN WILLIAM	P&S 1905	WOLFE, HUMPHREY D.	1916
LEGGE, JOHN E.	1899	WHITE, SAMUEL HOWARD	1918
LEONE, CHARLES B.	BMC 1913	WYLIE, H. BOYD	BMC 1912
LEWIS, EDWIN R.	BMC 1909	YOST, WALTER B.	BMC 1894
LOUGHMAN, ANDREW J.	P&S 1901	ZAGER, SAUL	1933
LOVETT, GEORGE G.	P&S 1897		
LUBAN, BENJAMIN	1921	A detailed account of the election of officers will be presented in the October BULLETIN. The meeting was then adjourned and was followed by the annual luncheon in the Student Union Building at the School of Medicine.	
MACKEY, WILLIAM K.	1920		
MANX, JAMES E.	1907		
MARSH, JAMES T.	1924		
MATHERS, DANIEL H.	1940		
MATTHEWS, JAMES G.	1905	In the afternoon, numerous classes held their own reunions and cocktail parties. At 7:00 p.m., the annual Alumni Banquet was held at the Lord Baltimore Hotel in honor of the Class of 1913 and 1963. More than 500 physicians and their ladies attended. Honored guests included Dr. and Mrs. Frank L. Bentz, Assistant to the President of the University of Maryland; Dr. and Mrs. Edward F. Cotter, Associate Professor of Medicine, University of Maryland; Mr. and Mrs. Harry Hasslinger, President, General Alumni Association, University of Maryland; Dr. Louis A. M. Krause, Honor Medal Recipient, and Professor of Clinical Medicine in the School of Medicine; Dean and Mrs. William S. Stone, of the School of Medicine; Dr. and Mrs. Charles Van Buskirk, Professor and Head Division of Neurology, University of Maryland; Dr. and Mrs. Gibson J. Wells, in-coming President of the Medical Alumni Association and Assistant Professor of Pediatrics, School of Medicine; Mrs. John L. Whitehurst, Chairman of the Baltimore Campus Committee of the Board of Regents; and Dr. and Mrs. George H. Yeager.	
MAXSON, CHARLES W.	P&S 1910		
MERANSKI, ISRAEL P.	1920		
MCDOWELL, JOHN S.	1918		
MILLER, LAWRENCE G.	1916		
MORFIT, JOHN C.	P&S 1895	President Yeager presented twenty 50-year diplomas to members of the	
MORRISON, JAMES B.	BMC 1913		
MORRISON, ROBERT F.	BMC 1901		
O'HANLON, GEORGE	P&S 1892		
OLDS, HARVEY H.	P&S 1905		
OWENS, CHARLES L.	1904		
PARR, WILLIAM A.	1936		
PLYLER, RALPH J.	1921		
PURVIS, JESSE O.	1904		
RAMIREZ-MARINI, ARGUELIO	1912		
RICE, GEORGE W.	1916		
RILEY, EDWARDS M.	BMC 1913		
RIPLEY, HORACE G.	P&S 1906		
ROBERTSON, JAMES C.	1900		
ROBINSON, HARRY M., SR.	1909		
ROETLING, CARL P.	1928		
SAGER, HAROLD	1933		
SALTZ, SIDNEY MYER	P&S 1904		
SCANLAN, THOMAS F.	P&S 1908		
SCHAEFFER, HARRY B.	1911		
SCHAEFFER, JOHN G. W.	P&S 1910		
SCHAPIRO, WILLIAM B.	P&S 1913		
SEEDS, JOHN B.	BMC 1903		
SHILL, BENJAMIN	1930		
SIMON, JOSEPH RALPH	1925		
SMITH, CECIL V.	P&S 1906		
SMITH, WILLIAM H.	1900		
STAHL, ALFRED	BMC 1906		
STIREWALT, NEAL S.	1909		
STOMEL, JOSEPH	1911		
SULLIVAN, LEO J.	P&S 1912		
TOBIAS, HERBERT R.	1926		
TOMIUCOLI, MICHELE	1925		
TRULL, ALFRED C.	1909		

Class of 1913. Dr. Louis K. Woodward, Jr., Medical Director of the Department of State, delivered the principal address of the evening, speaking on the subject "Medical Problems Concerning Diplomatic Personnel Overseas."

Pre-commencement Exercises Held on Campus

Beginning at 2 P.M. on Friday, June 7, the pre-commencement exercises were held in honor of the Class of 1963. Dr. James A. Shannon, Director of the National Institutes of Health, was the principal speaker. Dr. Shannon spoke on the topic, "The Challenge to a Physician—A Contemporary Perspective."

Honors Awarded

Dr. William S. Stone, Dean of the School of Medicine, then announced the honors for the Class of 1963 and presented the customary awards. These are as follows:

Faculty Gold Medal (*Summa Cum Laude*)
—DAVID ROBERT HESS

Certificates of Honor (*Magna Cum Laude*)
—JANET ELAINE MILES, MILES EUGENE ST. JOHN

Certificates of Honor (*Cum Laude*)—DAVID ALLEN BRAVER, NIJOLE VICTORIA BRAZAUSKAS, NEAL JOSEPH PRENDERGAST, and LEONARD DAVID RIVOSECCHI

Balder Prize for Excellence in Medical Studies—DAVID ROBERT HESS

For Excellence in Internal Medicine in honor of Dr. Theodore E. Woodward—NIJOLE VICTORIA BRAZAUSKAS

Dr. Leonard M. Hummel Medal for Excellence in Medicine—JOEL SPENCER GORDON
William D. Wolfe Prize for Excellence in Medicine—MILES EUGENE ST. JOHN

Dr. Harry M. Robinson, Sr., Prize for Excellence in Dermatology—PETER CORNELIUS FUCHS

Dr. Wayne W. Babcock Prize for Excellence in Surgery—PHILIP ASBURY INSLEY, JR.

Dr. A. Bradley Gaither Prize for Excellence in Genito-Urinary Surgery—ARTHUR MATTUS SMITH

Medical Book Awards—CLIFFORD LEWIS CULP, JR., STUART ALLEN PERKAL

Student Council Keys—RICHARD LOUIS GOLDMAN, ERIC EVERETT LINDSTROM, ALBERT THOMPSON DAWKINS, JR.

Student Council Certificates—ALBERT THOMPSON DAWKINS, JR., EUGENE MARTIN BUSCH, RICHARD LOUIS GOLDMAN, THOMAS VINCENT INGLESBY, MICHAEL LEE LEVIN, ERIC EVERETT LINDSTROM, HERNAN PADILLA-RAMIREZ, and FRANK JOSEPH TRAVISANO

The convocation was followed by a tea and reception for the graduates and their families on the south quadrangle of the University Hospital.

Commencement Exercises

At 10:00 A.M. Saturday, June 8, commencement exercises in the Cole Activities Building at College Park took place. Diplomas were presented to the Class of 1963 by Dean William S. Stone of the School of Medicine. The class immediately left on brief vacations prior to undertaking their internships which are listed below.

Internships—Class of 1963

ADELS, BARRY R.
Boston Univ. Hospital, Boston, Mass.
BEAZLEY, ROBERT M.
Baltimore City Hospitals, Baltimore
BELINIC, RICHARD J.
Mercy Hospital, Baltimore
BRAUER, LEE D.
Sinai Hospital, Baltimore
BRAVER, DAVID A.
University Hospital, Baltimore
BRAZAUSKAS, NIJOLE V.
U. S. Public Health Service Hospital, Baltimore
BRYAN, EVERETT D.
Union Memorial Hospital, Baltimore
BUFALINO, RUSSELL C.
Tampa General Hospital, Tampa, Fla.
BUSCH, EUGENE M.
Akron City Hospital, Akron, Ohio

ALUMNI ASSOCIATION SECTION

- BYERS, ROBERT M.
University Hospital, Baltimore
- CAMPBELL, HAROLD J., JR.
U. S. Naval Hosp., Portsmouth, Va.
- COHEN, STEPHEN P.
Sinai Hospital, Baltimore
- COYNE, JOHN M.
U. S. Public Health Service, Baltimore
- CULP, CLIFFORD L., JR.
U. S. Public Health Service, San Francisco, Calif.
- CZECHOWICZ, DORYNNE J.
University Hospital, Baltimore
- DAWKINS, ALBERT T., JR.
University Hospital, Baltimore
- DINKER, ROBERT E.
St. Agnes Hospital, Baltimore
- DOERFER, JOHN P.
Harrisburg Hospital, Harrisburg, Pa.
- ELDER, THADDEUS H., JR.
South Baltimore General Hospital, Baltimore
- FRIEDMAN, MELVIN M.
Sinai Hospital, Baltimore
- FRINGER, DAVID L., JR.
Harrisburg Hospital, Harrisburg, Pa.
- FUCHS, ALICE M. S.
St. Vincent's Hospital, Portland, Me.
- MCUI, PETER C.
St. Vincent's Hospital, Portland, Me.
- GARRISON, LELAND M.
Harbor General Hospital, Torrance, Calif.
- GIANGRANDI, B. ROBERT
St. Agnes Hospital, Baltimore
- GILDEN, DONALD H.
Illinois Research Hospital, Chicago, Ill.
- GOLDMAN, RICHARD L.
I III Med, Tufts, Boston, Mass.
- GORDON, JOEL S.
I III Med, Tufts, Boston, Mass.
- HARVEY, CLAUDE A.
South Baltimore General Hospital, Baltimore
- HAYES, MICHAEL G.
Jersey City Med. Center, Jersey City, N. J.
- HEISLER, ALICE B.
University Hospital, Baltimore
- HESS, DAVID R., JR.
Harrisburg Hospital, Harrisburg, Pa.
- HOFFMAN, ARNOLD J.
Baltimore City Hospitals, Baltimore
- HOWARD, WILLIAM H.
Harrisburg Hospital, Harrisburg, Pa.
- INGLESBY, THOMAS V.
St. Vincent's Hospital, New York City
- INSLEY, PHILIP A., JR.
Grady Mem. Hospital, Atlanta, Ga.
- JOERES, MANFRED K.
Letterman Army Hospital
- JULES, ARNOLD J.
University Hospital, Baltimore
- KAMINSKI, PAUL F.
St. Agnes Hospital, Baltimore
- KENNAN, RICHARD B., JR.
Grady Memorial Hospital, Atlanta, Ga.
- KING, WILLIAM A.
St. Agnes Hospital, Baltimore
- KNOPE, MERRILL M.
University of Pennsylvania Hospital, Philadelphia, Pa.
- LAMB, ARTHUR C., JR.
South Baltimore General Hospital, Baltimore
- LEVIN, MICHAEL L.
Illinois Research Hospital, Chicago, Ill.
- LINDGREN, CARLETON J.
Broadlawns Co. Hospital, Iowa
- LINDSTROM, ERIC E.
Madigan Army Hospitals
- MAGEE, KENNETH G.
Grady Mem. Hospital, Atlanta, Ga.
- MCLEAN, BARBARA A.
St. Francis Hospital, Hartford, Conn.
- MERCHANT, RALPH P.
Harrisburg Hospital, Harrisburg, Pa.
- MINKEN, STANLEY L.
Strong Mem. Hospital, Rochester, N. Y.
- MOCK, CHARLES R.
U. S. Naval Hospital, Jacksonville, Fla.
- MOORE, PHILIP H.
St. Agnes Hospital, Baltimore
- MULES, JANET E.
Univ. of Pennsylvania Hosp., Philadelphia, Pa.
- OKERLUND, MICHAEL D.
U. S. Naval Hospital, Bethesda, Md.
- OSTER, HERBERT G.
Sinai Hospital, Baltimore
- PERKAL, STUART A.
Sinai Hospital, Baltimore
- PETRAKIS, JOHN K., JR.
Tampa General Hospital, Tampa, Fla.
- PIAT, ROBERT D.
Tampa General Hospital, Tampa, Fla.
- PRENDERGAST, NEAL J.
U. S. Naval Hospital, Bethesda, Md.

RASMUSSEN, BRIAN L.
University Hospital, Baltimore

RAY, HORACE T., JR.
Baltimore City Hospitals, Baltimore

RIVOSECCI, LEONARD G.
Lenox Hill Hospital, New York City

ROLAND, NORMAN B.
University of Calif. Hospital, San Francisco, Calif.

ROSEN, NORMAN B.
Sinai Hospital, Baltimore

RUBENSTEIN, BENJAMIN
U. S. P. H. Hospital, Baltimore

SANEMAN, PAUL P.
Tampa General Hospital, Tampa, Fla.

SCHWARTZ, MAYER
Michael Reese Hospital, Chicago, Ill.

SHERVINGTON, WALTER W.
South Baltimore General Hospital, Baltimore

SMITH, ARTHUR M.
The New York Hospital, New York City

SOLLOD, MITCHELL C.
San Francisco Hospital, San Francisco, Calif.

SPALT, HARRY A.
University Hospital, Baltimore

ST. JOHN, MILES E.
South Baltimore General Hospital, Baltimore

STECHEER, KARL, JR.
Barnes Hospital, St. Louis, Mo.

STOJANOVICH, KOSTA D.
St. Francis Hospital, Hawaii

TOUNTAS, CHRIS P.
Strong Mem. Hospital, Rochester, N. Y.

TRAVISANO, FRANK J.
Harrisburg Hospital, Harrisburg, Pa.

WEATHERLY, DE WITT L.
South Baltimore General Hospital, Baltimore

WERNER, EDWARD C.
Johns Hopkins Hospital, Baltimore

WILLIAMS, McRAE W.
Union Memorial Hospital, Baltimore

WILSON, JOSEPH R.
U. S. Naval Hospital, St. Albans, N. Y.

WOLF, ARON
University Hospital, Baltimore

WOLSKI, EUGENE J.
Union Memorial Hospital, Baltimore

WYTE, STEVEN R.
Los Angeles County Hospital, Los Angeles, Calif.

Minutes of the Board of Directors of the Medical Alumni Association

January 22, 1963

THE MEETING was called to order by the president, Dr. George H. Yeager. The treasurer, Dr. Howard B. Mays, reported a working balance of \$15,000.00 and indicated that receipts were behind those of 1962.

There was discussion regarding monies received upon appeal to Alumni, paid as dues during the recent Student Loan Fund solicitation. The Board agreed that monies obviously intended for dues would be so credited.

The Student Loan Fund appeal has received a consideration of over \$2,-100.00. There was an expression by the Board that funds collected from the Alumni of the Medical School by the Greater University of Maryland Fund should be returned to the Medical Alumni Association.

Dr. John Savage was elected to the Editorial Board of the BULLETIN.

Dr. Theodore E. Woodward was appointed Chairman for Alumni Day, June 6, 1963.

The wives of the 50-year graduates are to be invited to the Alumni Day Luncheon and to the cocktail party being given in honor of the 50-year graduates.

The Board of Directors acknowledged the death of Dr. James T. Marsh by letter of sympathy to Mrs. Marsh and a contribution to the James T. Marsh Cancer Fund.

Respectfully submitted,

FRANCIS J. BORGES, M.D.
Secretary

Congress and Animal Experimentation

THE FOLLOWING is an excerpt from the *Bulletin of the Maryland Society for Medical Research*, an organization devoted to the preservation of freedom in animal experimentation and for the improvement of research through animal experimentation.

"Once again animal experimentation, the cornerstone of medical research, is under attack. Six bills have been introduced into Congress which would give the federal government the authority to regulate medical research through control of research animals. Two bills having strong support would give power to license investigators who perform animal experiments and require them to obtain permission to perform their experiments, compel them to open their laboratories to federal inspectors, and require them to submit detailed reports on the number of animals used, the disposition and procedures used. These provisions according to all of the bills would apply to 'any living creature of any vertebrate species (HR4856).' The type of animal employed is obvious.

"Other attempts have been made to abolish, regulate, or restrict experimentation. Medical research has fought a valiant and successful action against these forces which would forbid the use of animals for experimental purposes. A local act proposed in Maryland in 1950 was decisively defeated.

"The implications of such congressional legislation would be obvious to any physician. As far as the United States is concerned, it would tend to eclipse the scientific revolution and to challenge the basic freedom for individual experimental

effort. As a further challenge to the freedom of research, such legislation would place in the hands of an outside bureaucratic agency the power to say 'No, you cannot perform that experiment' or 'you must modify your procedure in this way.' Specifically, six bills have been introduced into the 88th Congress to regulate animal experimentation which is supported by federal funds. These bills are as follows:

- "1. S 533 introduced by Senators Clark (D.-Pa.) and Neuberger (D.-Ore.)
2. S1041 introduced by Senator Randolph (D.-W. Va.)
3. HR 4620 introduced by Rep. Ashley (D.-Ohio)
4. HR 4856 introduced by Rep. Randall (D.-Mo.)
5. HR 4840 introduced by Rep. Forgy (D.-R. I.)
6. HR 4843 introduced by Rep. Roberts (D.-Ala.)

"The most extremes of these is HR 4856 which is modelled after the Moulder Bill of the 87th Congress. This bill introduced by Rep. Randolph provides for a government agency for laboratory animal control to be established in the Department of Justice. The Moulder Bill stipulated a similar agency in the executive branch of the government.

"S 533 and HR 4620 known as the Clark-Neuberger Bill are substantially the same as the bills introduced by Sen. Clark and Rep. Griffiths last year. These bills provide that a controlling agency with powers to license, inspect and to require annual reports be established in the Department of Health, Education

and Welfare. They have the support of the Animal Welfare Institute probably the most powerful proponent of regulatory legislation.

"S 1041 is also a regulatory bill but to a much lesser degree than S 533. The bill does not establish a regulatory agency empowered to issue licenses and to whom reports must be made. Instead it provides for certain standards of laboratory animal care and leaves to the granting agency the responsibility of seeing that they are carried out.

"Finally HR 4840 and HR 4843 which are identical are the least restrictive of all bills so far introduced. They do not provide for a regulatory agency and have no licensing provision but do charge the Surgeon General of the United States Public Health Service to set up standards of animal care. In addition the Surgeon General is required to provide technical assistance in the care, treatment and use of laboratory animals."

Physicians would perform an essential service to the cause of science by corresponding with their Senator or Congressman in a positive manner concerning their opinions of these bills and the effect they would have on medical science.

The reader is further referred to an editorial in the *New England Journal of Medicine*, Vol. 268 (No. 16).

Alumni Active at Harrisburg Polyclinic

AMONG THE STAFF MEMBERS of the Harrisburg Polyclinic Hospital are five Maryland alumni. Four of these are now chiefs of their respective services. The fifth, Marjorie Kishpaugh, a member of the Class of 1944, is the wife of Dr. Champe C. Pool, also of the same class.

Dr. Alexander Slavcoff, Class of 1931, has been Chief of the Urology Service since 1946. Dr. Champe Pool heads the Orthopedic Department, Dr. Marion C. Insley, Class of 1948, is Chief of the Otorhinolaryngology Department, and Dr. Edwin O. Daue, Jr., Class of 1940, is Chief of the General Surgical Service.

The hospital, a 610-bed non-profit corporation, located at 2800 Green St. in Harrisburg, is presently adding another building to increase the bed capacity to another 200 beds. The hospital offers approved internships.

Erratum

IN THE APRIL 1963 BULLETIN, Dr. Robert E. Wise was listed as a member of the Class of 1948. Dr. Wise is properly a member of the March 1943 Class. The BULLETIN regrets the error.



It's Going

SEVERAL YEARS AGO, the BULLETIN published a series of photographs relating principally to the buildings surrounding the campus of the Baltimore schools. Since this publication, many of the buildings have been demolished. The photograph herewith attest to the completeness with which the urban renewal agency is converting the immediate environment of the medical and other schools of the University of Maryland. When all is complete, the BULLETIN will again publish the "after" appearance and will, of course, document the redevelopment as it occurs.

You, too, Can Receive the BULLETIN Postpaid!

The BULLETIN is published four times a year, jointly by the Faculty of the School of Medicine of the University of Maryland and the Medical Alumni Association. Active members of the Medical Alumni Association receive the BULLETIN upon the payment of annual membership dues which include the yearly subscription fee of the BULLETIN.

All members of the Faculty who are not members of the Medical Alumni Association and other friends of the Medical School are invited to subscribe to the BULLETIN. The subscription fee is \$3.00 per annum, postpaid. Make check payable to the University of Maryland and mail it to

DR. JOHN A. WAGNER
31 S. GREENE ST.
BALTIMORE 1, MD.

Class

NOTES

ELSEWHERE in this edition you will find a "tear out" page, for reporting *Alumni News* to the BULLETIN. This is not an idle gesture.

Your achievements, fellow alumnus, are of interest to your classmates. They constitute a reward to the faculty, are a challenge to the younger physicians, and are an item of prestige for the University. Please cooperate with us by forwarding notes of yourself or any alumnus to the BULLETIN. Thank you.

Class of 1912

Albert E. Goldstein has been nominated President-elect of the Medical and Chirurgical Faculty of Maryland.

Class of 1925

Eva F. Dodge, Professor of Obstetrics and Gynecology at the University of Arkansas School of Medicine, who also serves as director of the women's outpatient department in the same school, recently returned from a three-month trip around the world as a U. S. representative of the Medical Women's International Association.

At the meeting in Manila in 1962, Dr. Dodge presented the United States' paper at the Plenary Session and served as counselor of the organization representing the United States.

Dr. Dodge has also been invited to speak at medical schools in Japan. Among her many duties, she serves as President of the Pan-American Medical Women's Alliance and has represented them on the medical advisory board of CARE and MEDICO and as board member for

MEDICO she visited Malaya, Cambodia, Afghanistan, and Jordan. Her group of women physicians visited with women doctors in many countries, studying the interesting medical problems with which these women were associated.

Class of 1937

William B. Long, who practices Surgery in Salisbury, Md., has been appointed to the Board of Regents of the University of Maryland by Governor Millard Tawes.

Class of 1938

Melvin N. Borden has been elected Vice-President of the Maryland Academy of General Practice.

H. Leonard Warres of 3314 Fallstaff Rd., Baltimore, has announced the removal of his office for the practice of Radiology to the Park Rogers Medical Center, 3502 W. Rogers Ave., in Baltimore.

Class of 1943

Dan F. Keeney, with offices at 1028 Connecticut Ave. in Washington, is currently engaged in the private practice of psychiatry and psychoanalysis.

George C. Peck of 136 Boulevard, Passaic, N. J., has been certified by the American Board of Plastic Surgery. He has also been accorded active membership in the American Society of Plastic Surgery.

David K. Worgan is engaged in the practice of Urology in Seattle, Wash. Dr. Worgan completed a distinguished career in the U. S. Army as a regular medical officer in 1954. He currently holds the rank of Brigadier-General in the reserve corps.

Class of 1945

Frank J. Ayd has notified the *BULLETIN* that he will remain an additional year in Italy. Dr. Ayd has been active throughout Europe and Africa, where he has been invited to speak on numerous occasions related to his work in psychiatry.

Henry F. Maguire of 6330 Alvarado Rd., San Diego, Calif., has been elected Secretary-Treasurer of the San Diego Gynecological Society. Dr. Maguire recently participated in a panel discussion concerning the preparation of the gynecological patient, at a recent meeting of the International College of Surgeons.

Class of 1951

F. Robert Perilla has announced the opening of a suburban office for the practice of Diagnostic Radiology at the Medical Services Bldg., 3350 Wilkens Ave., Baltimore 29, Md.

Class of 1952

Charles B. Adams, Jr., of 1909 Tyler St., Hollywood, Fla., has been certified in Internal Medicine by the American Board of Internal Medicine. Dr. Adams specializes in general medicine and cardiology.

Richard A. Sindler has announced the opening of a suburban office for the practice of Diagnostic Radiology at the Medical Services Bldg., 3350 Wilkens Ave., Baltimore 29, Md.

Class of 1953

Arthur C. Knight, Jr., Superintendent of the Montana State Tuberculosis Sanatorium at Deer Lodge, Montana, has been recently nominated a Fellow in the American College of Chest Physicians. Dr. Knight received his honor at

the 28th annual meeting of the Society in Chicago.

Class of 1954

Daniel I. Welliver of 19 N. Church St., Westminster, Md., has been elected chief of staff at the Carroll County General Hospital in Westminster.

Class of 1955

John W. McCracken has recently been certified by the American Board of Surgery and is now associated with Dr. C. T. Whittington of the Class of 1927 in the practice of Surgery at 108 E. Northwood St., Greensboro, N. C. Dr. McCracken will seek certification in Thoracic Surgery in the near future.

Class of 1957

Charles R. Oppegard has recently completed a psychiatric residency at the Cincinnati General Hospital. He has entered the U. S. Public Health Service as chief medical officer in a federal correctional institution and will complete a two-year service in July. In the recent 12 months he has served as chief of Psychiatric Service at the Medical Center for Federal Prisoners, Springfield, Mo.

Dr. Oppegard will move to Denver where he will be Psychiatric Director of a small psychiatric facility, the Bethesda Hospital at 4400 Iliff Ave., Denver 22.

Richard C. Reba has been promoted to the rank of Major at Walter Reed Army Institute of Research.

A regular Army officer, Major Reba served his internship at the Tripler General Hospital in Hawaii and was Resident in Internal Medicine at the University Hospital in 1959. Dr. Reba has also completed a graduate fellowship in Nuclear Medicine at Johns Hopkins Hospital in Baltimore.

Deaths

Medal, given annually to one physician in the United States.

B. M. C. 1894

Walter B. Yost of 6635 Delmar St., St. Louis, Mo., died on October 13, 1962. Dr. Yost was 89.

Class of 1893

W. Wayne Babcock, Emeritus Professor of Surgery at Temple University and the first recipient of the Alumni Association Award and Gold Key (1948), died on February 23, 1963, at his home in Bala-Cynwyd, Pa., at the age of 90.

Prior to his retirement as Professor of Surgery at Temple, he had served this institution for more than 40 years. In his honor, the Babcock Surgical Society of Temple University was organized.

Dr. Babcock was perhaps the only man in the United States ever to have earned two M.D. degrees. He was a graduate of both the College of Physicians and Surgeons and of the University of Pennsylvania.

Following his graduation from the College of Physicians and Surgeons, he served an internship in Salt Lake City, Utah, following which he enrolled at the University of Pennsylvania. Subsequent to this, he pioneered both in surgery and in spinal anesthesia, being one of the first Americans to administer such type of anesthesia. In addition, he was the author of a standard textbook of surgery and introduced many operative techniques for the treatment of malignant diseases of the colon and rectum, for the repair of hernia, and for the repair of peripheral nerves.

Dr. Babcock held many honors including honorary degrees from Temple University, Gettysburg, Ursinus, Villanova, and the University of Maryland. In 1954 he was awarded the American Medical Association's Distinguished Service Gold

Class of 1889

Charles W. Hartwig of the Masonic Home in Cockeysville, Md., died on April 19, 1963. Dr. Hartwig was 96.

Class of 1900

J. Clagett Robertson, for more than 60 years an ophthalmologist, died at the University Hospital on May 18. He was one of the first physicians to make calls in an automobile.

Dr. Robertson served his internship at the University Hospital and began private practice in 1902. He was one of the fifth generation of physicians in his family. His father, Dr. W. W. Robertson, began his career as a doctor with the Confederate forces.

For many years, Dr. Robertson was chief of the Ear, Nose, & Throat Department at Presbyterian Eye, Ear, Nose & Throat Hospital. He later served in the same capacity at South Baltimore General Hospital.

P & S 1901

S. Dana Sutliff of Shippensburg, Pa., died recently.

Class of 1901

Ashby C. Byers of Harrisonburg, Va., died recently.

A. J. Loughnan died on October 4, 1962, at the age of 89. Dr. Loughnan had practiced in Oconomowoc, Wis., for more than 50 years.

Class of 1902

Robert Baker Lawson of Chapel Hill, N. C., died recently.

B. M. C. 1903

John Berkey Seeds of 1500 N. W. 26th Ave., Miami, Fla., died recently. Dr. Seeds was 88.

Class of 1903

Samuel James King of 7206 Dale Ave., St. Louis, Mo., died on October 28, 1962. Dr. King was 82.

P & S 1904

Sidney Myer Saltz of Brookline, Mass., died November 5, 1962. Dr. Saltz was 82.

Andrew C. Gillis of 1033 N. Calvert St., Baltimore, died recently.

Class of 1904

Edgar Brown Davis of Byromville, Ga., died on November 22, 1962. Dr. Davis was 81.

P & S 1905

John William Ledbury of Dudley, Mass., died recently.

Harvey H. Olds of 1150 W. 11th St., Erie, Pa., died on November 20, 1962. Dr. Olds was 87.

B. M. C. 1906

Alfred Stahl of 160 Lincoln Park, Newark, N. J., died recently.

P & S 1906

Horace G. Ripley of 48 Putney Rd., Brattleboro, Vt., died on November 22, 1961.

Class of 1907

James Emery Mann of Middletown, N. C., died on December 7, 1962. Dr. Mann was 82.

James Herbert Bates, who practiced Medicine at Elkton for more than 40 years, died on March 22, 1963, at the age of 78.

A native of Baltimore, Dr. Bates served his internship at the Church Home and Hospital and practiced briefly in Millington, Md., before settling in Elkton.

Class of 1908

J. Knox Insley, former Commissioner for Labor for Maryland and a physician in Baltimore for over 50 years, died on May 2 at his home in the Marylander Apartments. Dr. Insley was 77.

He was a native of Bivalve in Wicomico County and attended St. John's College, Annapolis, before coming to the University of Maryland.

From 1922 until 1935 he was Commissioner of Labor and Statistics in the State of Maryland. For several years he served as Coroner of the Northeastern District of Baltimore and at one time was active politically, serving a term in the House of Delegates. He was for many years a member of the Lister Society, a medical group. Dr. Insley is survived by a son, Dr. James K. Insley, Jr., of Baltimore.

B. M. C. 1909

Edwin Ralph Lewis of Westminster, Md., died recently.

Class of 1909

James Bernard Dodrill died on June 15, 1962.

Harry M. Robinson, Sr., of 106 E. Chase St., Professor Emeritus of Dermatology in the School of Medicine, died on March 17, 1963. Dr. Robinson's obituary will appear in the Medical School Section of the BULLETIN.

P & S 1910

John George William Schafer of Bridgeport, Ohio, died on November 8, 1962. Dr. Schafer was 83.

Class of 1910

Morriss L. Cahn died on April 22, 1963, at his home in Reading, Pa. Dr. Cahn devoted his life to General Practice. He is survived by his brother, Dr. Charles A. Cahn, a member of the Class of 1915, also a generalist in Baltimore.

Class of 1911

William Luther Byerly of Harts-ville, S. C., died recently.

Richard C. Dodson of Rising Sun, Md., died recently.

B. M. C. 1912

H. Boyd Wylie, Professor of Biochemistry and Dean Emeritus of the School of Medicine, died May 15, 1963. Dr. Wylie's obituary will appear in the Medical School Section of the BULLETIN.

P & S 1912

Leo J. Sullivan of Fall River, Mass., died recently. Dr. Sullivan was 78.

Class of 1912

Robert Ephraim Abell of Grove Hill, Chester, S. C., died recently.

George Cullen Battle of 1824 Pendleton St., Columbia, S. C., died March 28, 1963. Dr. Battle was 80.

Arguelio Ramierez-Marini of San German, Puerto Rico, died recently.

Class of 1916

Benjamin H. Biddle of Nutter Fort, W. Va., died on December 17, 1962. Dr. Biddle was 74.

George W. Rice, a retired Major-General, Medical Corps, U. S. Army, who lived at 126 Medford Drive, San Antonio, Texas, died on December 8, 1962, at the age of 70.

A native of Cumberland, Md., he entered the Army during World War I, retaining his commission at the cessation of hostilities. After numerous assignments, he became a director of the department of training and assistant commandant of the Medical Field Service School at Carlisle Barracks, Pa., in 1941.

In 1942, he served as a surgeon of the U. S. Forces in the southwest Pacific, and shortly after his arrival was designated as surgeon of Base Section 3, Brisbane, Australia. Dr. Rice retired in 1948 with the rank of Major-General.

Following his retirement, he served as city health officer of the city of San Antonio, Texas. In 1955, General Rice was honored by the Medical Alumni Association with the Honor Award and Gold Key.

Class of 1917

Franklin C. Eleder of 2201 Echo-dale Ave., Baltimore, died on March 4, 1963, at the Church Home and Hospital. Dr. Eleder was 72.

A native of Baltimore, Dr. Eleder served for many years as a medical officer for the Veterans Administration and in the Medical Corps of the Maryland National Guard. During World War II he was recalled to active service and was retired as a Lieutenant-Colonel.

ALUMNI ASSOCIATION SECTION

Class of 1918

Samuel Howard White of York, S. C., died February 28, 1963. Dr. White was 70.

Class of 1919

Edgar P. Adams of Palm Beach, Fla., died on August 7, 1962. Dr. Adams was 67.

Class of 1920

Leon Ginsberg, 529 N. Charles St., Baltimore, died on January 5, 1963, at the age of 65. (See his full length obituary on page xix.)

William K. Mackey, 1038 6th Ave., Huntington, W. Va., died on September 24, 1962. He was 65.

Class of 1921

Benjamin Luban of 730 High St., Newark, N. J., died on December 31, 1962. Dr. Luban was 64.

Ralph J. Plyler, 611 Mockville Ave., Salisbury, N. C., died on August 30, 1962, at the age of 67.

Class of 1924

J. T. Marsh of Westminster, Md., died on January 4, 1963, at the age of 68.

Class of 1925

Jose Caso of Box 9123, Santurce, San Juan, Puerto Rico, died recently.

Robert S. Widmeyer, 1518 Washington Ave., Parkersburg, W. Va., died on July 19, 1962. Dr. Widmeyer was 62.

Class of 1926

Abel Gordon of 616 Main Ave., Passaic, N. J., died recently.

Herbert R. Tobias of Berkeley Springs, W. Va., died on August 16, 1962. He was 60.

Class of 1928

Carl Paul Roetling of 1326 W. Lombard St., Baltimore, died recently.

Carroll G. Warner of Mercy Hospital, Baltimore, died on January 24, 1963. Dr. Warner was 59.

Class of 1929

Samuel H. Husted, Box 83, Neshanic, N. J., died on December 26, 1962. Dr. Husted was 62.

Israel P. Meranski, 2324 Smith Ave., Baltimore, died of carcinoma on August 28, 1962. Dr. Meranski was 58.

Class of 1930

Benjamin Shill, 31 Lincoln Park, Newark, N. J., died on August 28, 1962. He was 55.

Class of 1933

Harold Sager, 325 Avenue C, Bayonne, N. J., died in 1962.

Class of 1935

Dominic T. Battaglia of Poplar Ridge Road, Pasadena, Md., died on April 28, 1963, at the Maryland General Hospital. He was 54.

A graduate of Loyola College and the University of Maryland, Dr. Battaglia was active in World War II, serving for over three and a half years. He was active on the staffs of a number of Baltimore hospitals, including the Franklin Square, Maryland General, Church Home, Lutheran, and St. Joseph's Hospitals.

PLEASE TEAR OUT

ALUMNI NEWS REPORT

TO THE BULLETIN:

I would like to report the following:

TEAR OUT

SUGGESTIONS FOR NEWS ITEMS

American Board Certification

Change of Address

Change of Office

Residency Appointment

Research Completed

News of Another Alumnus

Academic Appointment

Interesting Historic Photographs

Name _____

Address _____

Class _____

Send to

Bulletin—School of Medicine
University of Maryland
31 S. Greene St.
Baltimore 1, Md.

BULLETIN *School of Medicine* *University of Maryland*

VOLUME 48

OCTOBER, 1963

NUMBER 4

Auditory Evoked Brain Potentials in Man

STEVEN J. BORSANYI, M.D. and CYRUS L. BLANCHARD, M.D.

THE STUDY of evoked cortical responses to auditory stimuli has presented a problem in the past because of the much greater spontaneous activity of the brain than the specific responses which were thus hidden in the background noise. In using a contemporary space-age analogy, the case was somewhat similar to the problem facing scientists who were trying to pick up the echo of radio signals from the planet Venus.¹ The received echo was far smaller in amplitude than the general random noise of the Universe. Due to rapid advancements in communication technology during recent years, these problems are now solved with the introduction of a new continuous "on-line" averaging method based on the use of computers.

Our current concept is that at least three different electrical phenomena can be recorded from scalp electrodes in man to click stimuli by a computer averaging method. These are (1) myoclonic responses, (2) cortical potentials, and (3) electrodermal responses. Overlapping of the first two is rather common and the separation of them might present a problem.

The concept of using computers for biological data processing was suggested

first by Geisler,² Rosenblith,³ and their associates and by the Communications Biophysics Group of the Research Laboratory of the Electronics of the Massachusetts Institute of Technology.⁴

The method consists of repeated sampling of the output of the electrical activity from scalp electrodes at fixed intervals following auditory stimulation. The technique is discussed in detail in other publications.^{5, 6} The disturbing "background noise" or spontaneous activity of the brain, muscle potentials, etc., will be cancelled out in the long run because they are temporally not related to the stimulus. It is the constant latency of evoked responses at a given location on the head which make their extraction possible from the background EEG, electromyographic and EDR (electrodermal), or other activity by this averaging method.

The study of electrophysiological responses to sound stimuli in man presents a special problem as the auditory pathway cannot be exposed for diagnostic purposes, with the exception of the middle ear, for recording cochlear potentials and action potentials of the eighth nerve from the round window. While this information can be extremely useful, it does not give sufficient information about disease in the auditory pathway above the cochlear nucleus. However, there are

From the Division of Otolaryngology, School of Medicine, University of Maryland, Baltimore.

other non-subjective methods using a variety of biological functions for the assessment of hearing in man at higher levels than the cochlear nucleus, like the eye-blink test, the measurement of the dynamic changes in the pupil size, respiratory rate, impedance changes in the ear due to protective contraction of the middle ear muscles, etc., and possibly the best known, the psychogalvanic skin response test. These tests are useful adjuncts within their limitation in the objective evaluation of man's hearing acuity. However, they have one thing in common: none of these auditory reflex activities necessarily require cortical integration.

It is hoped that a new technique of averaging evoked brain responses will open up a new chapter in the study of the electrical pattern of cortical behavior to auditory stimuli in man. It appeared for awhile that this new method could be easily developed into a clinical tool for the investigation of various forms of hypoacusis, especially when objective assessment of someone's hearing was desirable. However, in view of the diverse origin of these responses and the many variables involved during recording, we should proceed cautiously in interpreting the results.

Some of the characteristics of evoked auditory responses in man (short latency for the first component—from 7 milliseconds, the fact that relaxation of the neck muscles or the administration of muscle relaxants can greatly diminish or completely abolish these potentials, the fact that evoked myogenic potentials to auditory stimuli can be recorded also from the arms or from legs, etc.)⁷ indicate that part of the early components are not necessarily mediated through the auditory cortex either (they are mainly myogenic responses) and fall into the

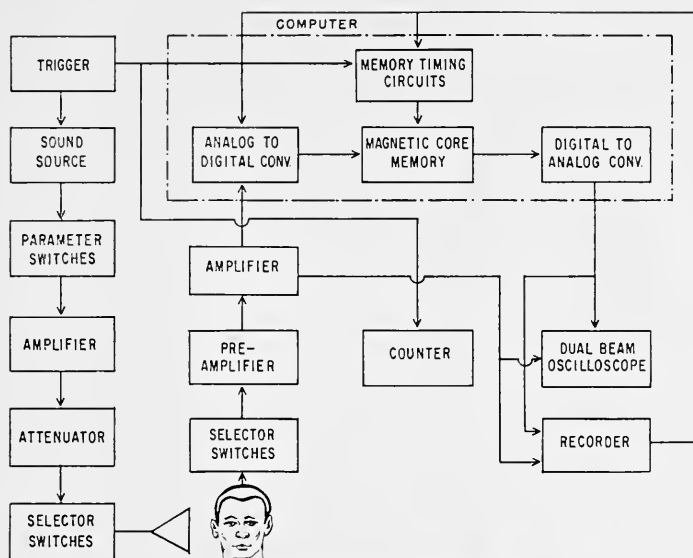
same categories of tests which we discussed in the preceding paragraph. However, there is no doubt about the cortical origin of the later components, the components which follow the click between 60 and 500 milliseconds or later.

Figure 1 is a block diagram of the equipment we used in these experiments. A detailed description of this unit is given in an earlier report.⁶

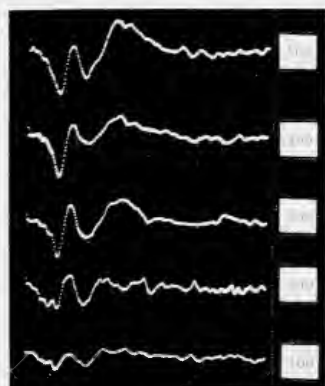
The wave form of averaged-evoked cortical responses to auditory stimuli as it is recorded from implanted cortical electrodes in animal experiments and the evoked auditory responses in man as it is recorded by scalp electrodes shows a characteristic but different pattern. The responses in man show greater variabilities depending on the site of the recordings.

There are several reasons for the greater variability of auditory evoked responses recorded by scalp electrodes in man. Myogenic potentials are superimposed on the first part of the tracing (up to 75 milliseconds), electrodermal responses can be superimposed on the later part (from around 500 milliseconds). Because of the hidden position of the auditory cortex in man it is questionable that primary responses can be recorded from scalp electrodes to clicks. The responses to clicks in man appear to be secondary, non-specific responses, which show greater variability depending on the electrode positions relative to the auditory cortex.

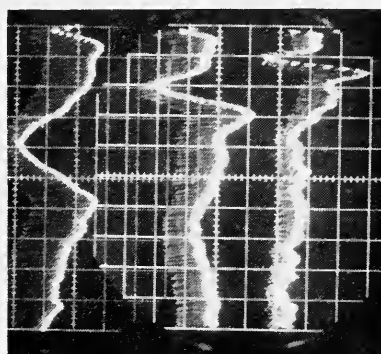
Figure 2 shows how the pattern of evoked cortical responses arises as it is recorded from the auditory cortex of an unanesthetized cat. Stimuli are clicks, one/sec., 0.1 millisecond duration, at 60 decibels sound pressure level as measured in the cat's ear canal with a Brüel (B & K) and Kjaer condenser microphone and



Block diagram of the equipment.



Average responses to clicks recorded from the auditory cortex of the unanesthetized cat.



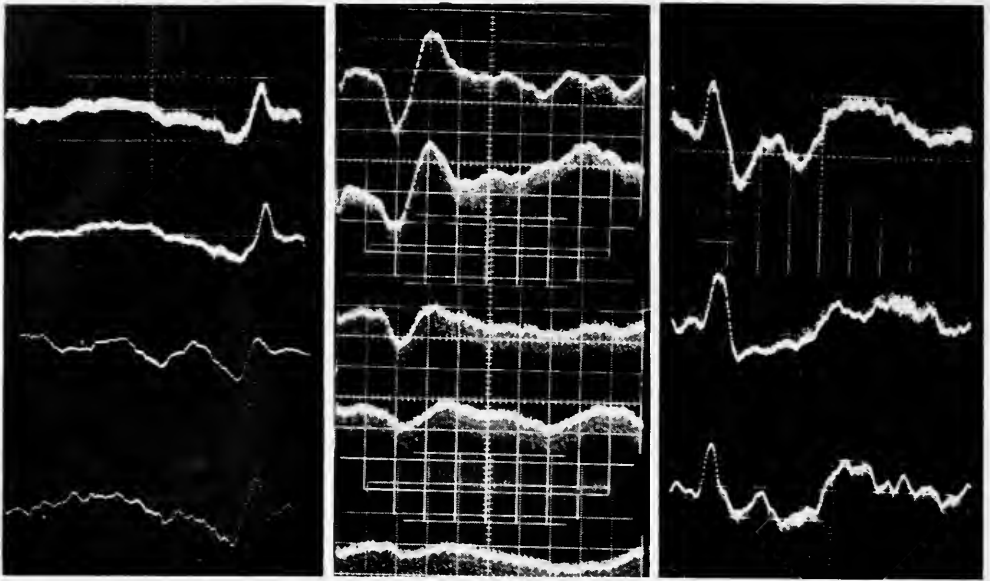
Average responses to clicks recorded from scalp electrodes from man. Various analysis times. (See text for details.)

a B & K Audio frequency spectrometer set up. Serial pictures were taken before the run (upper trace) and after the presentation of 100, 200, 300, 400, and 500 consecutive clicks. The emergence of a distinct pattern can be clearly seen with each successive group of 100 clicks. Analysis time is 125 milliseconds.

The next illustration (Figure 3) shows characteristic wave patterns in man recorded from scalp electrodes. Stimuli are clicks, 2/sec., 0.1 millisecond duration at 60 decibels above subjective

threshold level in free field (left parietal-vertex lead). Each run consisted of the presentation of 500 clicks. The difference in the wave pattern is due to the different analysis time of the successive runs; however, they are characteristic of the respective time analyzed. The first run's analysis time is 250 milliseconds, the second is 125 milliseconds, and the third is 62.5 milliseconds.

Evoked cortical responses are made up of primary and secondary responses followed in some cases by a rhythmic after



Average responses to pure tones from man. (See text for details.)

"Threshold" determination to clicks in man.

The effects of extended stimulation period on the average responses in man. (See text for details.)

discharge. Primary and secondary responses can be separated on the basis of their behavior to the increase in the stimulus rate, to barbiturates, etc. Unfortunately, the classification of auditory evoked responses recorded from scalp electrodes in man has not been worked out to present date, mainly because of the controversy over the origin of the various, especially the early, components. A temporary solution would be to call them early (up to around 80 milliseconds) and late components (between 80 and 500 milliseconds).

Figure 4 shows the computed average responses in man to short bursts of pure tones. Series of 500 bursts of 1 Kilocycle (Kc), 2 Kc and 4 Kc tones, 100 milliseconds duration, 2/sec., were presented at 30 decibels above subjective threshold level in free field. The first wave form represents the responses to clicks, the successive tracings represent the summated results of tone bursts of 1 Kc, 2 Kc, and 4 Kc. Analysis time is 125 milliseconds.

Figure 5 is an illustration of how "threshold level" for hearing can be determined by this method. The amplitude of the wave form is the function of the intensity of the sound stimuli, provided constant tension is applied on the neck muscles. Bipolar electrodes are located at inion and vertex. Decreasing the intensity of the clicks results in decrease of the amplitude of the wave pattern. Series of 500 clicks, 0.1 millisecond duration, 3/sec., at 50, 40, 30, 20, and 10 decibels above subjective threshold level. Note the decreasing amplitude of the waves with almost complete abolition of the pattern at 10 decibels. Diminution of the amplitude of the early components can also be seen if the intensity of the sound stimuli are constant and the tension of the neck muscles is gradually relaxed.⁷

It is known from animal experiments that conditioning and habituation can alter the evoked cortical responses recorded by implanted electrodes from the auditory cortex. However, in clinical ap-

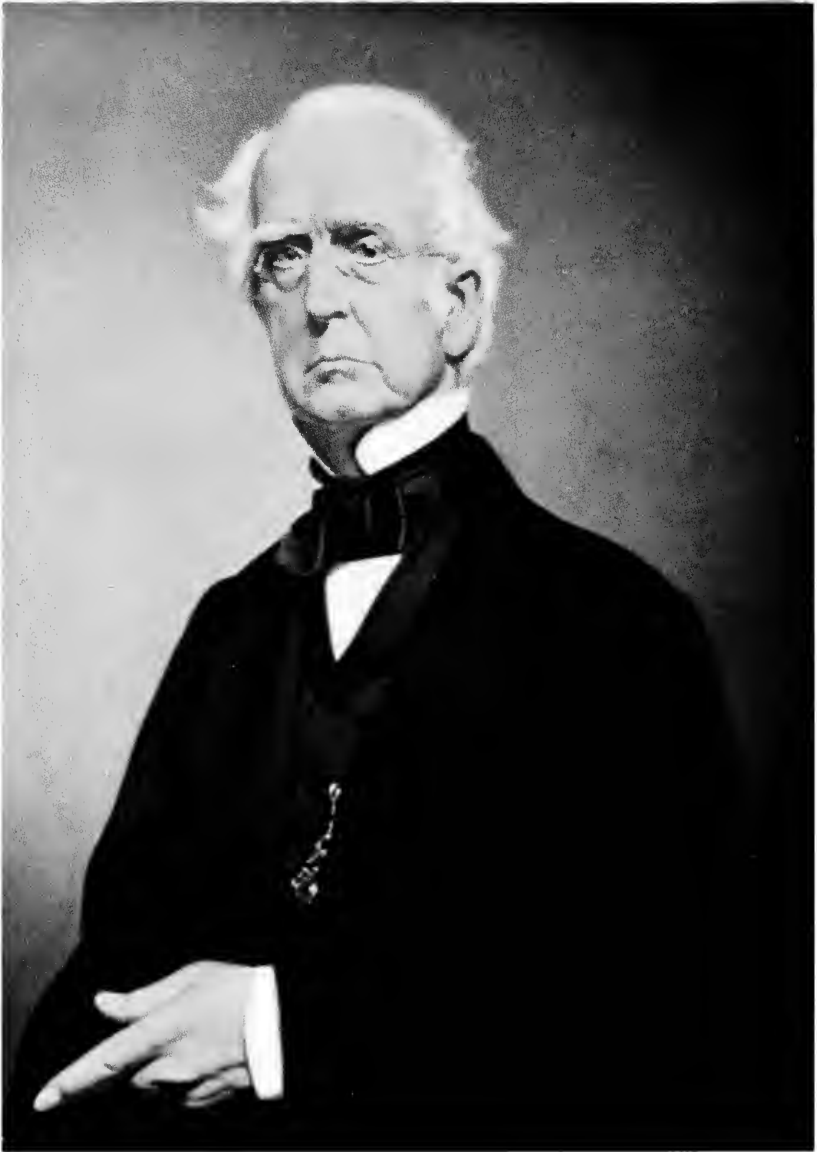
plication of this method when recording is made from scalp electrodes and several hundred individual responses are averaged, one must be extremely careful in attaching significance to the observed changes in the wave pattern. Lability of evoked responses can be observed in man when the subject is exposed to an extended stimulation period. Figure 6 shows this effect. Continuous clicks were presented to a volunteer subject for a period of one hour, 2/sec., 0.1 millisecond duration at 40 decibels above subjective threshold level through earphones. Samples of computed responses were photographed to 300 clicks at the beginning of the run, at 30 minutes and after one hour from the same electrode position (vertex-mastoid). Effort was made to apply the same tension on the neck. The difference can be seen by comparing the wave patterns of the three selected runs. It is difficult to determine whether the difference in the wave pattern (decrease in the amplitude of the one-hour tracing, etc.) is due to habituation, change in the tension of the neck muscles during recording, or inherent to the method of averaging.

The clinical application of this method seems to be promising, although to a lesser extent than we earlier expected in some cases where objective assessment of hearing acuity is desired. The data so far published on this subject are either preliminary notes or deal with normal subjects and were based on the assumption that these evoked responses recorded by scalp electrodes from man to sound stimuli were all cortical responses.^{8,9,10,11} However, evoked potentials recorded to sound stimulation from man appear to be a mixture of myogenic, cortical, and electrodermal responses. It is not unlikely that part of these responses (some of the early components) may be mediated

through other systems than the auditory. This later hypothesis would require an assumption that there is a leakage of neuronal impulses between the cochlear and vestibular system. While the exact nature of these responses is far from settled, it provides an interesting challenge for future investigation.

References

1. EVANS, J. V., and TAYLOR, G. N.: Radio Echo Observations of Venus. *Nature*, 184:1358-1359, October, 1959.
2. GEISLER, C. D., FRISHKOPF, L. S., and ROSENBLITH, W. A.: Extracranial Responses to Acoustic Clicks in Man. *Science*, 128:1210, November, 1958.
3. ROSENBLITH, W. A.: Some Electrical Responses from the Auditory Nervous System. *Proc. Symp. Info. Nets. Polytech. Inst., Brklyn.*, pp. 223-247, April 1954.
4. SIEBERT, W. M.: Communication Biophysics Group of Research Laboratory of Electronics, Processing Neuroelectronic Data. (The Technology Press of the Massachusetts Institute of Technology, Cambridge, Mass., 1959. Technical Report 351, Research Laboratory of Electronics, M.I.T., July 7, 1959.)
5. BORSANYI, S. J., and BLANCHARD, C. L.: The Use of Computers in Auditory Research with Particular Reference to Measurements of Auditory Thresholds from Evoked Cortical Potentials by Continuous "on-line" Averaging Techniques. *Bull. School of Med. Univ. of Md.*, 47:25-27, April, 1962.
6. BORSANYI, S. J., BLANCHARD, C. L., and TAMRES, A.: Auditory Research Unit. *Bull. School of Med. Univ. of Md.*, 48:24-26, April, 1963.
7. BORSANYI, S. J.: Auditory Evoked Myoclonic Responses in Man (in press).
8. KIANG, N. Y.: The Use of Computers in Studies of Auditory Neurophysiology. *Trans. Am. Acad. Ophthalmol. & Otolaryng.*, 65:735-747, September-October, 1961.
9. LOWELL, E. L., TROFFER, C. I., WARBURTON, E. A., and RUSHFORD, G. M.: Temporal Evocation: A New Approach in Diagnostic Audiology. *J. Speech Hearing Dis.*, 25:340-345, 1960.



Nathan Ryno Smith, M.D.

Two Nineteenth Century Medical Professors: Nathan Smith and his Son, Ryno

OLIVER S. HAYWARD*

"New England . . . [to the year 1850 contributed ten medical classics.] But in medicine, the ~~men~~ she has given to the other parts of the country have been better than books. Men like Nathan Ryno Smith, Austin Flint, Willard Parker, Alonzo Clark, Elisha Bartlett, John C. Dalton, and others carried away from their New England homes a love of truth, a love of learning, and above all a proper estimate of the personal character of the physician." OSLER.¹

Introduction—The Smith Family

A PHYSICIAN rarely has a physician for a son. Rarer still does he have more than one. Some unknown genetic and sociologic factors seem to forbid the phenomenon. Nathan Smith, M.D., C.M.L.M.S., Professor of Surgery at Yale College, was the pride of the north country. He had four sons: Solon, Ryno, Morven, and John, all of whom became physicians (though one was an ordained minister first). Any doctor who has sons of his own knows that it takes rare ability to induce even one son to follow in his professional footsteps. But four sons, all doctors and all founders of families boasting many able physicians and medical professors through the subsequent five generations—this is a phenomenon to be investigated by geneticists, environmental psychologists, and interested physicians in a massive study. Books could be written on the subject.²

This article will discuss only one aspect of the phenomenon. By a detailed

look at Ryno, we will try to see wherein his famous father influenced the great ability and fame of the son. "The Emperor of Maryland." In the process, 90 years of American surgery and medical education will be examined briefly.

Nathan was a plain country man who knew first hand the problems of his patients, having been a Vermont farm laborer until his middle twenties, a frontier general practitioner at Cornish, N. H., until he was 35, and the whole faculty of the backwoods medical school at Dartmouth until, at the age of 51, he moved to the more sophisticated campus at Yale. Whether in Vermont, New Hampshire, Maine, or Connecticut, he was beloved, even idolized. His friendships with George Shattuck, Lyman Spalding, Amos Twitchell, Benjamin Silliman, Timothy Dwight, and Mills Olcott were deep and abiding. Unintimidated by the hard work and even danger involved, they all worked together to advance the profession of medicine.³

Nathan Smith married into a family of aristocrats—if any New England family can be so styled. His father-in-law, General Jonathon Chase, ruled the politics of the Connecticut river towns

*Physician, Veterans Administration Hospital, San Francisco; Clinical Instructor in Medicine and Research Associate, Cancer Research Institute of the School of Medicine, University of California. This study was helped with grant RG 6625 from the USPHS.



Nathan Smith, M.D., C.M.L.M.S.
Portrait by Samuel F. B. Morse*

with an iron hand. His Uncle Dudley Chase founded the town of Cornish. His cousin, the crusading Episcopal Bishop of Ohio, Philander Chase, founded Kenyon College. His nephew, Salmon P. Chase, was Abraham Lincoln's Secretary of the Treasury until his domineering ways won him the upstairs trip to the U. S. Supreme Court. An uncle, Dr. Solomon Chase, had been George Washington's Surgeon General in the Northern Department in the last years of the Revolution.⁴

Nathan Smith and Sally Chase Smith produced Nathan Ryno Smith in 1797. His mother was overly fond of the tales of Ossian and named her second son for the bravest son of Fingal, "Fair Ryno with the pointed steel."⁵ Ryno, he was always called by his family, and Ryno he will be called in this paper for purposes of economy, clarity, and respect. Ryno's five sisters are unknown to history. His brothers achieved some local

notice. Ryno never had poetic adulation published on the front page of the local paper by an admirer as did his younger brother, James Morven Smith, although Ryno was as much in the public eye. He never became a bluff, hearty country doctor as did his oldest brother, David Solon Chase Hall Smith, though he was clearly admired by his patients and trusted implicitly. Ryno never became a minister like his youngest brother, John Derby Smith, though he had as much crusading zeal against debauchery as John and cousin Philander. Ryno's full phrases and forceful speeches perhaps foreshadowed the skilled writing of his collateral descendent, Mary Ellen Chase.

How important were Sally Smith's chromosomes in creating the son who was to become for 30 years the Emperor of the medical school at the University of Maryland? One of his father's students, Ezekial Dodge Cushing, while boarding with the Smiths, wrote about her to his mother from Hanover in 1809:

Mrs. Smith, the doctor says, is the best woman the world affords and he always asks her advice in things of importance and appears very fond of her. . . . She has eight children [later one more] and there is always five or six sitting around as still as their mother and under proper subordination.⁶

Like all good wives in previous generations, Sally Smith is obscure in the shadows of history. We are not even sure that she approved of her husband's leaving the beautiful New Hampshire countryside for the bustle of New Haven.

We can only guess at how Ryno developed his love for city life and for the easy gentility of Southern culture. Another facet awaiting exploration is the influence of Ryno's own wife, Julietta Penniman, a hardy Vermonter from the vortex of political machinations in Bur-

* Photograph courtesy of Yale University Art Gallery.

lington that had nearly created an independent country of Vermont in 1784.*

Young Ryno

Returning to the bits and pieces of available documents from the archives of New Hampshire, Vermont, Connecticut, Pennsylvania, the District of Columbia, and Maryland, a realization of much of the Smith story can be fashioned.

Nathan Ryno was three when he went to Hanover, New Hampshire, with his father. As a boy he studied at Moore's Charity School, a school designed by Eleazor Wheelock as a primary school for Indians who would later attend Dartmouth College and become missionaries to their heathen brethren. The first document mentioning him is a letter from Nathan Smith to George Cheyne Shattuck, April 20, 1811, when Ryno was 14; (Note already he was calling forth both criticism and praise from those who knew him):

You will recollect that Sylvester [his tutor] wrote you that Ryno had gone all amiss and I really supposed he had been idle during my absence and intended to have inquired into his conduct in a few days after my return here. It happened, however, that the school which he attended was to be examined a few days after my return. I was not present at the examination, being called off on urgent business, but Prof. Shurtleff [of Dartmouth College] attended, and without soliciting told me that Ryno Smith passed the best examination on the principles of arithmetic he ever witnessed in any person of his age. Ryno began the study of arithmetic in January last and was examined about the last day of March, so that we may form some judgment how he had spent his time; so much for the boy who goes all amiss.⁶

In 1813 Ryno went with his father from Hanover, New Hampshire, to New Haven, Connecticut, entering Yale as a



Ryno's Birthplace at Cornish, N. H.

freshman in 1813 and graduating A.B. in 1817 at 20. He wrote the commencement play, "The Quixotic Philosopher." He also acted in it. It has not survived in the Yale Archives. Its loss may leave no gap in a study of the literature of the period, but it does prevent our learning how justifiable was Ryno's first sign of revolt from his father's plans. On January 28, 1817, Nathan Smith had written to his lawyer friend, Mills Olcott:

. . . Ryno's term of study will be so near closed by the time I shall leave here that he will return with me [to Yale]. I intend to put him into my business as fast as possible.⁷

Ryno had no intention of retiring so speedily to a Connecticut country practice. He had tasted the heady brew of a successful dramatic creation and before he started the practice of medicine, he wanted the broadening experience of Southern social life.

He spent the next year and a half at Haymarket in Virginia as a tutor in Mr. Thomas Turner's family.⁸ Doubtless this visit fostered in the New Hampshire Yankee the strong attachment to the South which Ryno felt in after years when the sections were divided by war. His book, *Legends of the South*,⁹ might easily have been written by a Southerner.

On June 27, 1818, his father wrote to Olcott:

*Vermont thus foreshadowed the political development of the Republic of Texas. It may not be pure chance that Texas' Secretary of State was Nathan Smith's pupil, Ashbel Smith.⁴

. . . Ryno is still in Virginia and from all I can learn is figuring away pretty well. I heard of him at the City of Washington with a lady in company. This he never learnt from me.⁷

Ryno Studies Medicine and Starts to Practice and Teach

That fall he returned to Yale and to his father, and in 1823 he received his degree of Doctor of Medicine. His inaugural thesis defended the view that the effects of remedies on diseases are due to absorption into the blood and not to an impression on the nervous system as many eminent physicians, parroting Cullen, still believed. It is said that he experimented on the subject. The doctoral theses of the day were rarely more than a parade of the faculty's opinions. There is no indication that Ryno added much to what his father had taught him. There is evidence though that Ryno always wanted to teach. He could be of real assistance to his father in Burlington, where his father was helping to establish his fourth school, the Medical School at the University of Vermont.

As early as April of 1820 Nathan Smith wrote to Olcott:

Ryno goes to Burlington [Vermont] with a view to settle there in the practice of his profession. [Note that this is three years before he secured his M.D. degree.] He has passed the ordeal of his examinations [i.e., for M.B.] with considerable *éclat* and has several letters to gentlemen in and about Burlington.⁷

On September 28, 1820, from Burlington, Vermont, the 23-year-old Ryno wrote rather pompously asking for a consultation with his father's student and close friend, George Cheyne Shattuck, already a noted Boston physician:

I have the honor to introduce to your acquaintance William A. Griswold, Esq., of Burlington who will apply to you for advice in the care of his son who has for some time been laboring under symptoms of Pthisis. I have

recommended a southern climate as I am confident that his complaints will be aggravated by our winter weather. I have lately had very great success in a similar case with the prussic acid. . . . I have become a resident in Burlington. My pupillage terminated sooner than I could have wished owing to the embarrassed financial circumstances of my father. My success here is yet doubtful, as I am so unfortunate as to have the ill-will of the oldest and most influential practitioner in the place and have also young competition. Will you be at the trouble to select for me and send by Mr. Griswold a silver catherter?⁶

On March 22, 1821, the Trustees of the University of Vermont voted that Nathan Ryno Smith, M.D. [!] be appointed Professor of Anatomy and Physiology. On June 6, he wrote anxiously to Olcott:

I would take the liberty to enquire of you after my wandering father. I have been for some time expecting him at B. but he does not arrive and I am apprehensive that he has shaped his course another way. I would thank you to drop me a line and inform me whether he is expected at H. [Hanover]. If he should be there I would thank you to tell him that I am anxiously expecting his promised visit. I will on no account relinquish it.⁷

His father may have been at Dartmouth, at his new school at Bowdoin, at Yale, or any town in New England where a desperately sick patient had called him. Doubtless Ryno needed his consultative skill as much as anyone did.

The University of Vermont Medical School was founded about 30 years after Dartmouth's medical school and in much the same way. John Pomeroy had taught apprentices in his private practice for almost as many years as Nathan Smith. In 1804 Pomeroy was elected the whole faculty of the medical school. He seems to have been active in teaching, but never on the University campus. From 1814 on, increasing efforts were made by the trustees to strengthen the school. Nathan Smith supported the movement in the

Vermont legislature to keep the school at Burlington and get it sizable financial support. It had joined Castleton Medical School, and, from 1823 to 1826, had the largest enrollment of any medical school in the northeast section of America. In 1822 and 1823 Nathan Smith was appointed a special lecturer, though he may have only taught there in 1823. The University made further appointments in that year: Pomeroy, Professor of Surgery; Ryno, of Anatomy (and in 1824 of Anatomy and Surgery); John K. Platt, of Midwifery; Arthur L. Porter, of Chemistry; William Paddock, of Physic and Materia Medica.^{13a}

But a Teacher Needs More Training Than a Father Can Give

To fit himself more thoroughly for his professorship, Ryno went to Philadelphia to study under Dr. Physick and Dr. Horner at the University of Pennsylvania. Once there, he never returned to New England to practice. He must have become a preceptor at about the same age his father did. He remained a professor all his life. Teaching was indeed in his blood.

On January 21, 1823, he wrote to George Shattuck from Philadelphia:

I received your letter as I was about leaving B. for this place where I am spending a few weeks [probably referring to one complete 11-week course at the Medical School of the University of Pennsylvania] for improvement in my profession. . . . I have here an opportunity to purchase books in the auction rooms at a very low rate. . . . Respecting the young man who wishes to study medicine with me, I shall be happy to receive him. . . . I have been very much disappointed as respects the opportunities for improvement in the University of this place. They have indeed a very splendid museum, fine buildings, libraries, etc., but they do not appear to be animated with that scientific enthusiasm which makes men great, and awakens the same laudable spirit

in others. They appear to me to be very ordinary men, and their minds to be more occupied with professional intrigue and in some instances [Cf. appointment of successor to Wistar] disgraceful quarrels than with scientific pursuits. They seem jealous of genius, and strive to crush it unless completely subservient to them.⁶

Nevertheless he stayed on in Philadelphia. The city was ready for a new medical school. He was attracted to John Eberle,* and he decided to switch from the Vermont University faculty. Was Burlington too near his father? Was the New England climate too strenuous for him? The poverty of the countrymen too discouraging? On May 12, 1825, Ryno's resignation of the Professorship of Anatomy and Physiology was accepted by the Trustees of the University of Vermont.

The Puzzles of Harvard, Maryland, and Jefferson

In his lifetime Ryno was associated with at least six universities—one of the lesser mysteries concerns his association with the Warren Museum at Harvard.** Ryno's father was the fifth graduate of Harvard Medical School and as one of the most famous of her 18th century graduates rates a chapter in Harrington's *History of Harvard Medical School*. Except for this chapter, no one would ever know Nathan Smith had attended Harvard. He wrote many friendly letters to his old surgery professor, John Warren, and he prosecuted a successful suit of trespass (slander) against his old medical professor, Benjamin Waterhouse.

* Ryno showed no such ability to form lasting friendships as did his father. Even his admiration of Eberle seems to have been one-sided.

** Another minor mystery is why his admiring Medical School at the University of Maryland proclaims on his portrait that he had previously taught at the University of Pennsylvania which he disliked, instead of Jefferson or Transylvania, where he really had taught.

But in none of the material which has been preserved is there any reference to Harvard, to his famous chemistry professor, Aaron Dexter, or to his basic science teacher, Samuel Webber (later president of Harvard College). Unlike the fourth graduate, Phillip La Terriere, Nathan Smith left no record of having used books in the library. He left behind only a vague recollection that he had written a graduating thesis; even its subject matter was forgotten.

In a search for some trace of the man, various archives were investigated by the present author—but without results. All entries in the Warren Museum were studied. Nothing was found of Nathan, but surprisingly, John Collins Warren's early catalogue lists a gift from Ryno of numerous plaster casts of pathologic conditions. None were very good. The best of many poor subjects is #5915 in showcase 61—depressed fracture of the skull.¹⁰ A search at Maryland has revealed no similar gift. What were these objets d'art doing in Cambridge where Ryno never taught, in the museum started by a man, John C. Warren, who was less than friendly to the Smiths? Ryno castigated Warren editorially for his interminable *obiter dictum* in the Lowell-Faxon medicolegal case. Unfortunately, the catalogue of the museum for these early years is quite uninformative. Perhaps as they both matured the two surgeons became friendly.¹¹

But in his early years Ryno was too restless to make friends. We do not know why he left the University of Vermont so hurriedly. A similar mystery surrounds his departure from Philadelphia. His father thought he was doing well. Doubtless Ryno did too. His father thought that he and George McClellan founded Jefferson Medical School. Doubtless Ryno told him so.

Jefferson's archives are strangely mute. No portrait of Ryno graces Gayley's *History of Jefferson*, where even the least important instructor is pictured.¹² The Archives in the Jefferson Medical Library have a thin folder containing two printed speeches delivered by Ryno at Transylvania, and one blurred photo labeled recently by a librarian's typed card, pinned across the eyes: "Nathan Ryno Smith, First Professor of Anatomy." In Gayley's history is the simple statement that Nathan Ryno Smith was Professor of Anatomy in the first faculty to teach at Jefferson (in the summer of 1825). In September, 1826, John Barnes replaced Francis S. Beattie in the chair of midwifery in an argument that shook the school and seriously affected the registration of new students. In April, 1827, Nathan Ryno Smith resigned at a very inconvenient time, the first week of the spring session. A replacement was found with difficulty.

Did Ryno side with the unfortunate Beattie? Did he quote his father to the weariness of the faculty? Did he find the machination against his friend John Eberle too much for him? When Eberle died in 1838, Ryno took over for three years his chair of Practice of Medicine on the Transylvania faculty.¹³ At this time in his introductory address, he made a most interesting, though slightly anonymous allusion to his father.¹⁴ But he made no mention of the work at Jefferson.

He may have learned wisdom or temper control during his four years in Philadelphia. He had many arguments in later life but he never again left a faculty in the lurch, and he never again was ignored, unpainted, or unsung.¹⁵ On January 6, 1826, his father wrote to Shattuck:

... I believe N. R. is getting on very well at Philadelphia at Jefferson Medical School with Dr. George McClellan. They have 110 students who pay \$15 each which is much better than I expected.⁶

On April 22 the proud father again wrote to Shattuck:

... I have very flattering accounts from the new school in Philadelphia. They have a charter by act of the legislature and passed into a law so that the old school [University of Pennsylvania] cannot put them down as they intended. They had 120 students last winter, and I think they may have 200 the next term. I have reason to believe that Ryno is gaining in reputation.⁶

He Sets the Tone at Maryland

A year later Ryno had left Philadelphia and accepted the Chair of Surgery at the University of Maryland. There he stayed for 50 years.* His father, November 8, 1827, wrote to Shattuck:

... I have not heard a word from Ryno since he removed from Philadelphia to Baltimore. I trust, however, that he is working hard both for fame and money.⁶

This was indeed the case. He entered with zeal and vigor into his duties at a very propitious time when the other surgeons of Baltimore were becoming less active. Two retired shortly after he arrived. His introductory lecture at Maryland was published in the February, 1828, number of the *American Journal of Medical Sciences*.

His address to the graduating class of medical students, April 6, 1829, contained much of his father's philosophy. It helps, though, explain why he was called "The Emperor" when his father had always been called "The Doctor." But if the imperious sententiousness can be overlooked, the modern reader will

find Ryno introducing his students to the great problems every physician, indeed, every educated adult must meet when he tries to reconcile his ambition, his training, and his religion with the facts of life as he meets them, in sickness and in death. No physician needs to read this talk from start to finish to be proud of his profession—long quotes are included here to show its cogency, however.

You perceive then, gentlemen, that almost every department of knowledge, on which thought can be exercised, contributes to the perfection of the healing art. The nymphs who serve in the temple of wisdom, pitying the sufferings of our race, bring each their respective gifts, and lay them at the feet of humanity. Each bestows something that may be made subservient to the alleviation of human suffering, and the prolongation of the brief period of human existence. We may then pronounce the science of medicine to be nobly philanthropic in its objects, universal in its requisitions, and sublime in its results.

* * *

But although it is generally admitted that the study of our profession is interesting and liberal, it is too commonly received as true that its practice is not only laborious, but even painful and disgusting. Painful and disgusting it may indeed be to those who have no pleasure in doing good. To the churlish priest and the levite, who went by on the other side, it would indeed have been irksome, to turn and administer to the unhappy stranger, but was it a duty painful or disgusting to the good Samaritan, to pour oil and wine into his wounds, to mount him on his own beast, and convey him to a place of safety? It is painful, indeed, to witness the anguish of disease, and more painful to inflict it, though for benevolent purposes, but it is a selfish and false sensibility which shuts our eyes against objects of distress, and our ears against the moans of the afflicted. If we are once pained in witnessing distress, we are twice happy in relieving it. We are so, first from a consciousness of doing well, and next from the reflection of joy and gladness which we confer upon others.

Like another of Nathan Smith's pupils, Amos Twitchell of Keene, N. H., Ryno was a crusader against intemperance.

* During his three years as Professor of the Theory and Practice of Medicine at Transylvania University, he spent only the four months of each winter term in Lexington, Ky.¹⁶

Then, as now, alcoholism contributed generously to a doctor's practice and Ryno thought preventive medicine as important here as in other diseases.

But I would by no means omit to direct your attention, on this occasion, to another object of philanthropic interest, which is, at this time, addressing itself with peculiar force to the hearts of all the benevolent. I allude to the desolating vice of intemperance. Excess in the use of intoxicating liquors has been charged upon our country as a national and characteristic vice—vice, indeed, which springs directly from the abuse of our peculiar blessings. We fear there is too much justice in the imputation. How few there are who realize that, while the sword is sleeping in its scabbard, while plenty smiles upon our land, and pestilence withholds its arrow, there is still abroad among us a destroying demon "more felt than hunger, anguish or the sea." It is ascertained that more than 30,000 lives are, in our own country alone, annually destroyed by this suicidal excess. The poisoned chalice is filled at the expense of more than three times the revenue of the nation. What waste of treasure is here without even the poor recompense of ease and pleasure? What destruction of human life, without one wreath of that mistaken honor, for which it is bartered in the field of blood!—of *life* do I say? This obscene idol demands the immolation of the soul, and in her horrid orgies tramples upon all which is great, or good, or godlike in our nature. Well then may war, pestilence, and famine drop for an instant their weapons of destruction, and look on, with astonishment and envious admiration, to behold their own havoc so far out-done.

Who better than the physician can appreciate the magnitude of this wide-spread evil? And who can accomplish more, in arresting its career, than he who goes forth as the sworn enemy of disease and vice, and whose allies are temperance and virtue?^{16a}

The lectures which followed taught good medicine. It is interesting to compare the notes taken by students of Nathan Ryno Smith with the notes taken by students of his father (now in the Archives at Dartmouth and Yale) and of his father's teachers at Harvard Medical School (now in the Archives at

Boston Medical Library and Harvard Medical Library).¹⁷

In the Library of Health and Science of the University of Maryland at Baltimore are several notebooks, the most detailed taken by Samuel Mainster in the 1827-28 session. Ryno sounded like his father when discussing the care of fractures:

When called to a case of fracture be satisfied with the ordinary signs of the injury. Do not catch hold of the limb and manipulate as many do, for this breaks up the periosteum—what shreds of it may still connect the fragments.¹⁸

Another note reminiscent of his father's advice is in the lecture on operation for the kidney stone:

Never proceed to drag it out by main force—practice pretty much the same as with the midwifery forceps—avoid twisting the instrument on itself—use the forceps as a lever—a surgeon once boasted that he had removed an entire stone weighing seventeen ounces—but *the patient died!* You can also chop open the pelvis by a broad ax and thus remove the calculus—the patient will also die—Now these large stones (fortunately large stones are generally easily broken) should always be crushed—here are a pair of forceps for that purpose—saw ridge in the middle of one of the blades. After crushing and removing as many of the fragments as possible syringe out the bladder—the bladder will itself however generally get rid of the remains—mentioned a case—accidentally left portion of stone—few days was voided with the urine.¹⁸

However when Ryno lectured on osteomyelitis, the notes were only a pale shadow of the detailed modern lectures recorded by W. R. Fitch from Nathan Smith's classes.¹⁹ Notes which take 20 pages in Fitch's notebook are boiled down to one page in Mainster. They miss entirely Nathan Smith's message that early, wide drainage is vital.

Inflam. of Bone: Bones are [of] var [ied] sens [ibility.] Under ordinary circumstances, they have only ordinary sensibility—but when inflamed they attain Animal Sensi—so that in this state the least touch will cause pain—

Bones are red in inflammation—cartilages and ligaments are not, for they only circulate white blood—Inflammation of bone attends very severe dull aching—no enlargement actually but some apparent from the fact that it is imparted to the perios [teum]—indeed inflammation of bone always begins and is communicated from the perios—the perios bears as important a relation with the bone as the bark does to a tree—Inflammation detaches perios and matter deposits below, then if a cavity in bone, pus deposited in it—perios severely stretched. The bone dies, it mortifies; this is necrosis—There is nothing malign in this—it results from the peculiar construction of the parts—*Caries* is an ulceration of the bone but not the death of it—Sometimes abscesses form within the bone—Slow Subacute Inflammation of bones causes hyper [trophy] of bone—sometimes this hyper takes place in its length and the bone increases in length.²⁰

When matter collects in the bone it cannot make its escape 'till it is destroyed, and it will produce irritation until it does escape. The practical inference is that we should give vent to the matter by cutting down to the bone.²¹

He Becomes an Author

Medical writing as well as lecturing was a natural part of him. On August 12, 1825, two years beyond his Yale Medical School doctorate, Ryno joined, as junior editor, the staff of a medical review conducted in Philadelphia by Drs. McClellan and Eberle.²² It was no longer to be exclusively a review, but was to consist of original communications and analecta. Article number 1 was a 26-page "supplement to an essay on Digestion by Nathan R. Smith." Article number 2 was a classification of General Anatomy by N. R. Smith; article number 4 "Observations of a New Splint" by Professor Nathan Smith of Yale College. "My father has given us his name," Ryno wrote to Shattuck, "and we shall probably have those of Dr. Revere of Baltimore, and Drs. Mussey and Oliver of Hanover. My colleagues join with me in requesting that you will favor our

undertaking with your name and influence, with an occasional communication. . . . My father's name with yours, and those of the gentlemen at Hanover, will probably give it more general circulation in New England than any other journal enjoys. No pecuniary consideration will be received by the editors."²³

In 1825 Ryno had published at New York a 93-page *Essay On Digestion* and the September, 1825, article in the *American Medical Review and Journal* supplemented it. His closely reasoned theories that arteries inside the villi of the gastric mucosa digested the food mass as plant roots erode the soil look pale indeed beside Beaumont's *Experiments and Observations on the Gastric Juice and the Physiology of Digestion*, published in 1833. He seems to have ignored, as did Beaumont, the report of Helm's studies in two cases of gastric fistula.²³

In June of 1827 Ryno founded a medical periodical entitled, *The Philadelphia Monthly Journal of Medicine and Surgery*, which he continued for a few months. It then merged with N. Chapman's *Philadelphia Journal of Medical and Physical Sciences* to become *The American Journal of the Medical Sciences*, under the editorship of Chapman and Isaac Hays.²⁴ This popular publication is now in its 244th volume.

In 1829 appeared his translation of "Disease of the Internal Ear," from the French of J. A. Saissy with his own supplement of 20 pages on "Diseases of the External Ear." In 1830 he delivered by appointment the annual oration before the Maryland Medical and Chirurgical Faculty. He also started *The Baltimore Monthly Journal*, but this was short lived, probably for the same reason as the others, the dearth of noteworthy articles and the lack of noteworthy

authors. In the September and October numbers appeared "Description of an Apparatus for the Treatment of Fractures of the Thigh and Leg, by Smith's Anterior Splint." One-half of the original matter of the volume of 510 pages consisted of his own contributions.

In 1867 he published a small volume of 70 pages, elaborating on this method of using his "Anterior Suspensory Apparatus in the Treatment of Fractures of the Lower Extremity, with Cuts and Diagrams." His many papers are adequately listed in Quinan's Bibliography.²⁵ His final book will be dealt with later. It appeared in 1869, called *Legends of the South, by Somebody, who Wishes to be Considered Nobody and By Viator* in the second edition. Early in his career at Baltimore he conceived the idea of writing a work on "Surgery" with wood cuts, and did from time to time work on it, but like his father before him, his great textbook never was finished. Samuel Gross, who studied anatomy long and hard under Ryno in the early years at Jefferson, has exercised his prerogative as an elder student and pronounced Ryno's publications (except "The Arteries") of little consequence.²⁶ The present author would not presume to make such a judgment on his own, but must confess he considers Gross correct.

Tragedy and Success

Ryno can perhaps be excused for having been absent at his father's death-bed. On January 19, 1829, he wrote to his sister from Baltimore:

I am extremely distressed to learn that our dear father is seriously ill. I did not see Dr. Wells till last evening. He informed me of papa's illness, but did not think him dangerously sick . . . but nothing shall keep me from the sick bed of the kindest, the best of fathers. I shall wait one day, perhaps two to arrange

business. . . . My home, my heart, and my purse will always be theirs. . . .²⁷

Nathan Smith died on January 26, 1829, attended by George Cheyne Shattuck, Jonathan Knight, and Reuben Mussey, but not by Ryno. None of the Smith boys were able to take over the support of their mother, their sisters, or their little brother, John Derby. It remained for George Shattuck and the boy's godmother, Mrs. John Derby, to arrange with Yale for him to continue his theological studies.

On July 9 he wrote Dr. Shattuck: "I shall as you suggest publish my father's works and shall consult you in regard to the form."²⁷

This decision helped immensely to establish his early reputation. A modern editor would hesitate to add so many chapters with the by-line Nathan Ryno Smith, when they contained the previously unpublished medical wisdom of the father in a volume which was supposed to memorialize that great man's well-known medical skills and brilliant original thinking. But life in Baltimore was hard, competition demanding, and Ryno's finances very shaky. He had done a great deal of skilled surgery and probably could not realize how much his father was a part of him. The pinch of the harsh financial facts of life pressed hard upon him, though he was busy and success almost within reach.

On April 9, 1830, he wrote again to Shattuck from Baltimore:

I take the liberty to solicit a favour of you which I trust you will not hesitate to decline if it should give you inconvenience. I wish to borrow \$400 till the 1st of November. My business is now extremely prosperous and there is due me more than enough to pay all that I owe, but I cannot, at this season, press my employers, without great injury, and my annual fees are not received till November. At that time I shall receive at least \$3,000

which will put me perfectly at ease. My expenses this year are greater than I had anticipated in consequence of the death of my lamented father.* If I can get through the summer, I shall be able to provide in the amplest manner for my mother and sisters. My practice at the end of this year will yield me at least \$2,500. My fees from pupils near \$3,000. I intend to set apart an adequate sum for my father's family.** I am living with economy.

I believe that I now enjoy the best surgical practice in Baltimore. I have performed a lithotomy 3 times within a few weeks—patients all have done well. The last had been operated upon before by Dr. Jameson and *no stone found*. I removed two—one of uncommonly large size. I have been extremely fortunate in my surgery having had (in a great many operations) not one disastrous case. My practice is in the best families of the city and rapidly increasing.²⁷

On July 18, 1830, he wrote Dr. Shattuck from Baltimore for advice on the forthcoming Memoirs:

I send you a prospectus of my Father's writings about to be published. In what manner shall I connect the supplementary remarks?—in the form of notes, or how? Please advise me.²⁷

When the Memoirs²⁹ were finally published in 1831, they were sent out to subscribers with an "advertisement" tipped in. This has been preserved in the copy owned by the Library of the Medical and Chirurgical Faculty of Maryland, a copy presented by Nathan Ryno Smith IV of Baltimore, Maryland.

Advertisement

We trust that subscribers to this work will be satisfied that, in its publication, we have redeemed every pledge given in our prospectus.

* Gross said that it took Ryno several years at Maryland to get on his feet financially after the lean years at Jefferson. Like his father, Ryno indulged in the exhausting luxury of "gentleman farming." His great-grandson, Longcope, pronounced this project at the family estate Wilton, outside Baltimore, "expensive and entirely unsuccessful." Gentleman farming may have been the reason the famous son left no larger estate than his famous father.²⁸

** There is no indication he ever did. Olcott struggled with the Smiths' finances for years.

The engraved portrait is one on which much care and expense have been bestowed. We promised between three and five hundred pages of letter press; the work contains 376; but it will be observed that we have furnished four lithographs and several wood engravings which were not promised.

In regard to binding we said nothing; we should not have been under obligation, therefore, to furnish the book otherwise than in boards; but we have given a substantial and neat cloth binding, with spring backs. The paper is much superior to that on which medical works are usually printed.

N. R. SMITH

He followed the memoirs with his own work on the arteries in 1830, which went into a second edition in 1835.³⁰

"The early sale of the first edition of this work, imperfect as it was, being a flattering testimonial of public approbation, my publishers have requested the preparation of a second edition. . . .

"Two new and valuable plates are added.* The surgical observations are also illustrated by numerous wood engravings." . . .

It was dedicated:

To my distinguished friend and former colleague, John Eberle, M.D., Professor of Medicine in the Medical College of Cincinnati.

In this book he mentioned his father twice. On page 27 he said:

. . . In the practice of my father, the late Professor of Surgery in Yale College, I once witnessed the arrestation of what threatened to be a fatal hemorrhage, by the introduction of a lump of alum into the wound. . . .

On page 112 he said:

The ligature of the external iliac was first performed in this country by the late Professor Dorsey, of Philadelphia. It was performed in 1820, by my father, the late professor of surgery in Yale College, after the manner of Sir A. Cooper. The operation was accomplished with facility, and the patient promptly recovered. . . .

A scholarly "anatomy" with an almost equal amount of consideration of

* As Ryno acknowledged in his introduction, all the plates were copied from Cloquet's *Anatomie de L'homme*.

surgical details from his own surgical practice and from a rather extensive search of the literature, it makes good reading today. Any surgeon, any young anatomist would profit from reading it, particularly now when arterial perfusion demands our alert investigation.

Ryno wisely asked Shattuck for further help:

In a few days you will receive a copy of the first number of a work on the Surgical Anatomy of the Arteries, which I have recently executed. . . .

The Philadelphians will do everything in their power to defeat the success of the work, and I therefore feel *painful solicitude* in relation to its fate. I wish you to peruse it carefully, and if you deem that it has merit, will you do me the favour to review it fairly and impartially, *extenuating nothing?* . . . N.B. The work on the Arteries is entirely original.²⁷

There followed promptly a book review, anonymous, but certainly by Shattuck, entitled "New Work on the Surgical Anatomy of the Arteries."

From a hasty glance at the work, I am favorably impressed with its merit. It seems an original work drawn from nature. The arteries of the head and neck are exhibited in their just proportions, accompanied by a delineation of neighboring parts. His descriptions are lucid. His pathology of the diseases of the arteries is intelligible; their history is formed from original observation, and the treatment recommended bears the stamp of actual experience. The only similar work with which I have compared it, is that of Charles Bell (Am. Edition); and Smith's *Surgical Anatomy of the Arteries*, as far as pursued, is much more full, and altogether a safer guide to the operative surgeon. To the medical student the work recommends itself as an important addition to the facility of acquiring accurate anatomical and surgical knowledge, while the experienced practitioner will receive it into favor as facilitating the retention of what he fain would never forget. It is very possible some of your readers may extend to the work a candor, from associating with the author a name dear to New England—particularly when they perceive, in the production of the son, the originality, the racy genius and

untiring labor, characteristic of the father; and at the same time know that it is the filial piety of the son which is the only earthly resource of a numerous—now *fatherless*—household.³¹

Ryno was now an anatomist and as such was consulted by Parker Cleveland of Bowdoin for some help with the ever present and bothersome problem of obtaining cadavers for dissection. Ryno replied:

My dear Sir:

It will give me pleasure to render you any assistance in regard to subjects. I think you may rely upon having them. I shall immediately *invoke* Frank, our body-snatcher (a better never lifted spade), and confer with him on the matter. We get them here without difficulty at present but I would not [tell ?] the world that any but ourselves should know that I have winked at their being sent out of [the state ?].

I will cause three to be put up in barrels [of] whiskey, I suppose they will require about half a barrel each, of whiskey. This at 35 cts a gallon will be \$16.80. The barrels a dollar each; the subjects, the putting up, etc. \$10 each making in all \$50.00.

Please let me know to whose care they shall be directed.

Dr. Wells did not pay for the journal. Boston money is very good here. The 4th number shall be sent.

Yours very respectfully,

N. R. SMITH³²

On May 18, 1831, Ryno wrote Shattuck concerning both "the loan" and his father's "memoirs":

I deserve reproach for having for so long a time neglected to write to you. . . . Your kind letter enclosing a draught for \$100 I received with gratitude, and have made use of it as you desired. The books will be disposed of agreeably to your desire. My agent who is now in Boston will furnish you with copies. There is some complaint that there are not a greater number of articles which appear in my father's name, but the reviewer has not noticed the fact that some of the longest articles which appear in my name are stated to be derived substantially from his lectures, but as he left no such written papers I was compelled to adopt the

course which I did. . . . I understand that the work is well received in Boston.

It would give me pleasure to serve in any way your friend Dr. How [who wanted an appointment on the Maryland faculty], but I am inclined to think that an effort for him would be unavailing, even although he might be the best anatomist in our country. The Faculty and Trustees are resolved *now* to select a Prof. from the south, or from this city. . . . In my opinion no one from the north would have the least chance of success.²⁷

Whence was Ryno? Obviously he did not believe in a *quid pro quo*. Actually he was practically a Southerner according to Cordell:

In 1861, at the beginning of the troubles between the North and South, he mingled actively in politics for the first and only time. His sympathies were strongly with the South and he permitted himself to be elected as Chairman of the Democratic State Convention. On this occasion the proceedings of this body were interrupted by the military and he was threatened with arrest, but undaunted by the threats of force, he maintained the rights of himself and his followers with such calm courage and majestic dignity that the opposition ceased and the meeting was allowed to go on with its work.²⁸

Professor Callcott has pointed out an item in the *Baltimore American* for March 10, 1863, which mentions the hostility shown by Ryno to any of his students who attended class in the uniform of a Union Cadet.²⁹

In his old age he was awarded international as well as national honors. After the war he went to Europe, visiting many hospitals there. His reputation had preceded him and he was received with honor by Sir James Paget, Sir Spencer Wells,* and Sir William Ferguson in London and by the French surgeons who called him "Nestor of American Surgery." He died at the age of 80 of a particularly painful and protracted carcinoma of the bladder.

Cordell remembered his old professor:

Professor Smith was a man of commanding presence, fully six feet in height, a clean-shaven face with a well-shaped Grecian nose, long, thin, compressed lips, piercing eyes, surrounded by shaggy eyebrows, a well-shaped, well-poised head, with a long neck concealed by an old-fashioned black stock and standing collar; he always dressed in black and wore a frock coat; he was near-sighted and wore glasses, and frequently in his later years when he would remove his spectacles and bend over a patient to observe the parts more closely, the blood from a divided artery would spirt up in his face, much to the amusement of the students. He always lectured without notes and in slow, deliberate fashion. His voice was of medium pitch and distinct, though not strong. He indulged in story and humor whenever the opportunity permitted, although he was never coarse, profane or obscene. The portrait of him at the University is an admirable likeness, and represents him in his characteristic attitude while lecturing as the writer knew him in the sessions of 1865-67, 1867-68, 1868-69.³⁰

Samuel Claggett Chew completed the description of Ryno thus:

In your mind's eye you can see him in the amphitheatre in the attitude of dignity and command which always belonged to him. As he illustrates and enforces his teaching, he points to the diagrams on the wall and his wand must always be at hand, for like the magician's divining rod, it seems to have some mystic connection with the exercise of his powers. Or again he is going his early morning rounds through the hospital wards setting in clear light the leading points in the cases before him; mingling his words of instruction to the students with those of kindness and encouragement to the sick, and often of gentle humor, if the patient chanced to be a child . . . great acuteness of perception, an extraordinary power of adaptation to circumstances as they arose, promptness of action which sees what is needed to be done and straightway does it, and, above all, indomitable, untiring industry.³¹

His Accomplishments

Today we look back on such men as the senior Nathan Ryno Smith with honest admiration not for any single in-

* Wells later visited Ryno at Wilton.³²

vention or new operative technique, but for his great ability to teach good surgical principles and good surgical judgment. When to operate and when to refrain went well with his great diagnostic skill.¹

In the last analysis a doctor's ability must be judged by his ability to relieve the suffering of his patients. That Ryno possessed this ability to a rare degree is apparent from many sources. A characteristic reference appears in entries from the diary of Richard H. Townsend, merchant, of Baltimore. Ryno, like his father, obviously was able to instill great confidence in his patients by his care and compassion.

The latter end of the eighth month . . . Word came that William M. Townsend was lying very ill of the disease which now pressed so heavily upon him; and father and Sister Mary went to see him, accompanied by Professor Nathan R. Smith: as surgeon.

The Doctor, the evening before, had performed an operation upon William, and thus rescued him from a speedy and painful death. This was the fifteenth of the ninth month. . . .

I paid a short visit to William, in a few days: and in a week after the operation, he was brought to Baltimore, to be near Dr. Smith. He was carried on a cot, from his dwelling, in Cecil County, and borne on the shoulders of men, eight miles to the steam boat at Fort Deposits: and from thence, by water to our house:

Sally came with him: and they remained in Baltimore, till the middle of the 12th month. William continued slowly and gradually to improve until his health was comparatively restored. . . .

Doctor Smith was daily and assiduous, in his attentions to him: and step by step he regained his lost health, and came up once more, a rescued man from the very jaws of the grave.²⁷

Something Extra

Certainly all of the foregoing throws considerable light on the character of Nathan Ryno Smith. However, another

facet first seen in his undergraduate *Quixotic Philosopher* was illuminated by the little volume he wrote and published in 1869. This book was apparently written as a labor of love and in gratitude for a stay at the White Sulphur Springs and the Hot Springs in Virginia in 1868.³⁸ After spending some days most delightfully at each, the author was told when calling for his bill that they were most happy to entertain him, but that there were no charges. In six chapters he tells legends of White Sulphur Springs, of Sweet Springs, of the Mammoth Cave, and of the Hot Springs of Virginia and gives a little gem of a story about somnambulism. He says that these legends are altogether the offspring of his own imagination; that they are just as true, however, as many things that are sworn to before a committee of Congress. Perhaps the most unexpected element in the book is his very enthusiastic description of the beauties of young ladies:

At White Sulphur you will behold every style of beauty in which our wide-spread country exults—the golden locks and azure eyes of the Northern blonde and the raven hair and black eyes of the Southern brunette. But view them in motion as “on gossamer pinions they float through the air” so buoyant, so sylph-like, that you do not realize that they are things of earth till in the whirling mazes of the dance you catch a glimpse of a foot and ankle “that would set ten poets raving!”

Do you remember how Tom O'Shanter beheld a dance of witches?

“How Tommy glowered amazed and curious While mirth and fun grew fast and furious.”

This which I describe is far more truly a dance of witches; for although they do not fly through the air on broomsticks, they are infinitely more bewitching even than Citty Sark.⁹

Ryno thus quotes familiarly from Robert Burns, also from numerous plays of Shakespeare including much from *Othello*, from Gil Blas, from the Bible, from Dr. Johnson's *Rasselas*, from the

philosophical works of Bishop Berkeley and John Stuart Mill, from Virgil (giving this free translation of the Latin "forever rest in doubt who threw the missile, whether it was hurled by chance, by boy or devil"). He either coined or resurrected an excellent phrase for the nude, "in Puris Naturalibus." His physician's training shows through in descriptions of the chemistry of the Hot Springs and also in his story of the wounded Indian brave, Wyandola, who "though weak from loss of blood and previous toil made his way to the wigwam of a friendly tribe and there, with fever balm (melissa) and sweet saganite (maize meal mush), his wound was healed and his strength in a measure restored." This disturbing little story tells of the Indian brave's attempt to win his maiden fair by killing first a panther, then the Indian from another tribe who had killed her father, and then the fairest of the English maidens who had apparently just come into Jamestown by boat. When all these scalps failed to win her, he made a bargain with the Spirit of Evil and "out burst the form of a fiend too hideous to look upon, reeking with brimstone and fire. He rushed into the midst [of the dance] and seizing the unhappy maiden with claws of iron, bore her away . . . through a fissure, through which [now] issues the Sulphur Spring of Virginia."

A cynical old bachelor present remarked, "There was nothing unusual or mystical about it, that it was no uncommon thing for a lady to marry and go to the * * * * [devil]." But to return to the ladies: Ryno described "a daughter of surpassing loveliness. She must have seen seventeen summers but not half so many winters, for she shone with no borrowed light, and made around her perpetual spring and summer." He no-

ticed the fashionable posture of the ladies and sketched it with the quote from her critical mother, "Remember your bend, and do not stand up as stiff as a poker."

Ryno was a loyal son of New Hampshire, at least to the extent of speaking of the walks, "shaded by the sugar maple, the most beautiful forest tree in America." In the legend of the Mammoth Cave he saw on the wall, "Siste Viator," which might tell a traveller of his time, "traveller stop," but certainly would be pretty unintelligible to one of the present day. He prophesied the war with Japan as coming sometime after the Civil War and allowing the South to rise again and get vengeance on the North. At least 50 per cent of his prophecies having come true, it may be that (economically only, we hope) the South will still conquer the North and make Ryno a major prophet.

His medical training shows through again in the story of the naiad, Fontinella, a water nymph who lived in the Hot Springs and was beloved by a young dryad, Sylvio. Now dryads were offsprings of gnomes and could not live in the water, whereas naiads were amphibious and rather liked to stay in their own private springs. Therefore, Fontinella would not attend to Sylvio's suit until Sylvio's mother had built a fire under the springs and made it too hot for comfort so that she had to leave her home. By that time Fontinella had recognized the advantages of Sylvio and they were married and "had a numerous tribe of amphibious spirits."

The last story is a little jewel about a rather interesting but somewhat repulsive maiden lady, Jerusha, who believed in Women's Rights, and a rather lost gentleman from Boston, the Athens of America, a professional Abolitionist, but now following the Civil War a crusader without a cause with, as Smith said,

"nothing left for our Jupiter Tonans to hurl bolts at."

An ordained Congregational minister, Zebulon Mather, was a member of the Legislature of Massachusetts when that body declared by resolution that by the admission of Texas, the Constitution was violated and that the Union no longer existed. . . . Ought not Massachusetts to be reconstructed and restored to the Union and her politicians included in the general Amnesty Bill?⁹

In a little "lecture party" at the Springs, Jerusha gave a speech on Women's Rights quoting Burke, "the age of calculators and political intriguers has succeeded." Ryno himself quoted a Frenchman who had said of New England, "Wonderful people! A thousand different sorts of religion and only one kind of gravy!" Zebulon then spoke on the abolition of slavery for the horse and the extermination of Indians whom he felt had no right in the western lands (in which he had a little land grant himself). The climax of the story came when the two lecturers, tired and somewhat perplexed in the later hours of the night, got hopelessly confused, Jerusha having gone sleepwalking and Zebulon having gone to the bathroom. On their return they went into the wrong two bedrooms and when they awoke in the morning, they found they had no way to go down to get their respective breakfasts unless they dressed in the clothes of the opposite sex. They were, of course, discovered by the outraged maitre d'hotel who sternly ordered them out of the dining room and suggested that "There will have to be an immediate resort to matrimony." Dr. Smith seemed to feel that this was only too just a punishment for both of them.

The book is still readable. The English is stilted and old fashioned; yet it flows with a certain airiness and the stories are unusual if not unique. Ryno, the novel-

ist, shows that he had the insight of his father. He even shows the quiet sense of humor mentioned by Cordeil and Chew, but completely absent in his medical writing, hidden perhaps because he followed too closely the common American habit of writing scientific English as though it were German.

Two Lifetimes

Father and son were most learned, most skilled, and most human physicians, both well described in Ryno's own characterization of his father:

In the practice of surgery Professor Smith displayed an original and inventive mind. His friends claim for him the establishment of scientific principles and the invention of resources in practice which will stand as lasting monuments of a mind fertile in expedients and unshackled by the dogmas of the schools.²⁹

Nathan did not try to prevent his son's becoming an author. He did however insure his becoming a good physician. He introduced him early to the overpowering drama of the sick room and the son was never after able to resist its fascination. The strongest force in the molding of both father and son was not family, genes, nor the surrounding of college faculties nor the friendship of independent thinkers. Though all these played their part, surely the strongest force was the familiar battle of the sick room, the eternal fight for the health of the trusting patient. Perhaps that is why all doctors are so much alike—and so different.

* * * * *

This appreciation of Nathan Ryno Smith is the result of a somewhat more detailed study of his father. John Fulton was very much interested in Nathan and was my guide during the last two years of his life; without his help—and that of his Department of the History of Medicine at Yale—the work could never have been completed. At Dartmouth, another great medical educator whose early death sincerely

saddened his friends had been my enthusiastic supporter; Dr. Rolf Syvertsen admired Smith and emulated him. Professor Edward Lathem at the Baker Library was continuously helpful. The material about Ryno was given detail and proportion by his grand-grandson, Nathan Ryno Smith, Jr., IV, of Baltimore and by Professor George Callcott of the History Department of the University of Maryland.

References

1. OSLER, WILLIAM, *Acquinimitas*, page 215. From Books and Man, given at Boston Medical Library, 1901. Blakiston Co., Phila., 1947.
2. "By 1770 there were several medical families in America—the Elmers, Blachlys, and Budds in New Jersey; the Shippens in Philadelphia; John Bard and his son Samuel in New York"—Whitfield J. Bell, "Medical Practice in Colonial America," *Bull. Hist. Med.*, 31:442, Sept.-Oct., 1957. Later Benjamin Rush's son, like his father and Nathan Smith went to medical School at Edinburgh. Young James Rush followed his father's ideas when he first studied medicine, even to the point of bleeding himself five times for a common cold (in 1810 while at Edinburgh). "It was only a cold, but knowing what its effects might be, I took it in the right way, and now after five good bleedings, I hope I have escaped." *Bull. Hist. Med.*, 28:50, Jan.-Feb., 1954. Kurtz, Stephen G., "James Rush, Pioneer in American Psychology (1786-1869)." But later he seems to have adopted a more advanced outlook toward medicine, particularly toward the treatment of mental diseases. None of these families could boast of all the sons going into the profession, however.
3. HAYWARD, OLIVER S.: "The Search for the Real Nathan Smith," *J. Hist. Med.*, 15:268, July, 1960.
4. HAYWARD, OLIVER S.: "Nathan Smith, Politician," *NEJM*, 263:1235, December 15, 1960.
5. MACPHERSON, JAMES: *The Poems of Ossian*. Edinburgh, 1926, p. 78.
6. Historical Library, Yale University School of Medicine, New Haven, Conn.
7. Dartmouth College Archives, Hanover, New Hampshire.
8. New Hampshire Historical Society, Concord, New Hampshire.
9. Viator (N. R. Smith), *Legends of the South*. Baltimore, 1869.
10. Nathan Ryno Smith's collection of plaster models may have been inspired by that of Franz Joseph Gall of 299 plaster heads. Gall's contained the plaster copies of the heads of many of his contemporaries:
 103 celebrities
 69 criminals
 67 psychotics
 35 pathological cases
 25 normals, including some of his co-workers.
 "Gall, Franz Joseph and his collection (now in Paris) 1757-1828," by Erwin H. Ackernknecht. Abstract in *J. Hist. Med.*, 9:352, July, 1954.
11. Editorial notice in *The Philadelphia Monthly Journal of Medicine and Surgery*, edited by N. R. Smith, M.D., Philadelphia, Vol. 1, 1827. Edward Churchill knows of no correspondence between the two. (Personal communication.)
12. GAYLEY, JAMES F.: *A History of the Jefferson Medical College of Philadelphia, with Biographical Sketches of the Early Professors Illustrated with Portraits and Engraving*. Philadelphia, Joseph M. Wilson, 1858. See also *American Medical Recorder*, XIV, 1823, p. 248.
13. SMITH, N. R.: "Address Introductory to a Course of Lectures on the Theory and Practice of Medicine by N. R. Smith, M.D. (of Baltimore), Professor in Transylvania University." Published at the request of the Med-

ical Class, Lexington, Kentucky, printed at the Observer and Reporter Office, 1838.

13a. KING, JOHN W.: "Dr. John Pomeroy and the College of Medicine of the University of Vermont," *J. Hist. Med.*, 4:393, Autumn, 1949. See also folder on Vermont Medical College in Library of State of New York, Albany, N. Y.

14. SMITH, PROF. N. R.: Valedictory Address to the Medical Graduates of Transylvania University, Delaware, on March 11, 1839, from the Archives of the Library at Jefferson Medical School:

Ryno described his father:

I knew a distinguished individual, who till he was 27 years of age, had chiefly from necessity been engaged in manual labor. At that period he chanced to witness a surgical operation; the same was witnessed by others who saw nothing striking or deeply interesting in it except as a scene of suffering; but in his mind it excited something more than the gaze of idle curiosity. He saw in it the work of science and philanthropy. It roused in him genius which until that moment had slumbered for want of its congenial stimulus. He resolved at once to devote himself to professional pursuits; not a day did he allow to pass before he commenced the prescribed studies, the surgeon wisely would not receive him as his pupil, until he had made some classical attainments. He speedily accomplished the imperfect course of professional study then prescribed, and having procured the means by practicing a short period he repaired to Harvard University, where he attended lectures and graduated. After laboring in his profession for a brief period longer, not satisfied with his attainments, he went to Europe, and spent a year in Edinburgh and London assiduously engaged in the acquisition of useful information. On returning to his native country the zeal and talent which had enabled him to surmount every difficulty in the acquisition of his profession, quickly placed him at its very head and soon found himself in the enjoyment of a more extensive practice and a more widely diffused reputation than probably has ever fallen to the lot of any citizen of New England. He founded and for a long time sustained the Medical Institute of Dartmouth College, and finally, as professor of surgery and practice of Medicine he transferred to Yale College in Connecticut.

Although this distinguished individual was well versed in the science of his profession, yet the laborious practice in which he was engaged rendered it impossible for him to become greatly distinguished for his knowledge of books. The secret of his success was this: he looked upon everything which occurred to him in his profession, with the same profound interest with which he beheld that which first aroused his genius. Those unpolished gems, which a thousand others trample upon as worthless pebbles, were by him recognized and treasured up.

Vastly important is it, that those who enter upon the practice of the profession should for study avail themselves of the leisure, which necessarily occurs during the first years of such avocations. He who does not study on first entering upon the duties of his profession, will for two reasons, never thus employ his mind. His interest in science will continually diminish and if he succeeds in obtaining employment his engagements will in a measure deprive him of the opportunity.

15. CORDELL, E. F.: *University of Maryland*, 2 Vols., New York, 1907.

16. PETER, ROBERT: *The History of the Medical Department of Transylvania University*, Louisville, Kentucky, 1905. John P. Morton & Co., Printers to the Filson Club.

16a. SMITH, NATHAN R.: An address pronounced before the medical graduates of the University of Maryland, April 6, 1829, Baltimore, 1829.

Ryno continues:

Lives there an individual who has no pleasure in having rescued from the anguish of disease, and the hazards of death, a life dear to many hearts, perhaps to a whole community? Is there one who has no capacity to enjoy the incense which gratitude offers to benevolence? If such there is, in the variety of good and ill, let him withdraw from our ranks, for heaven never designed him to act as the minister of mercy. Let him rather serve at the dungeon door or the gallows tree, where such apathy is enviable. We have heard much of the ingratitude and selfishness of mankind, and there are few who have not experienced it; yet I have never met with an individual so destitute of every amiable sentiment, as not to be won to some expression of grateful feeling, by

the soothing and assiduous attentions of the kind physician, rendered at the bed of pain and languishing.

If, then, there is pleasure in acts of benevolence, how rich in enjoyment must be the occupation of him whose whole routine of labor is a series of such deeds, and who, even while he earns his daily bread, is exercising the duties of a practical philanthropist. It is true, indeed, that in part he labours for hire, but surely money cannot purchase sympathy, nor is there any fee for the expression of solicitude, the touch of tenderness, and the cheering voice of hope and comfort, which expressions render every act of the physician a deed of benevolence. How happy then is the physician in possessing a fund of rich gifts to bestow which does not impoverish their possessor, and which waste not nor fail, though dispensed with the liberal hand of perfect charity.

* * * * *

A medical friend [this was George C. Shattuck], whose life I well knew to be a series of benefactions to mankind, some years since attended an unhappy and friendless female, who, by misfortune and continued illness, had had her pecuniary means reduced to a mere pittance. After many weeks of assiduous attention, he had the happiness to restore her to health. When he was about to take his leave, as a physician, she placed in his hand her purse, and with all the simplicity of perfect confidence, requested him to remunerate himself. He took the purse, and having examined its contents, returned it. On his departure, with a trembling hand, she examined her little treasure to learn how much remained for her future necessities. She discovered with surprise and gratitude, that it was very considerably increased. When such opportunities for the exercise of benevolence are frequent, who need regret that the days of chivalry are passed? and when such deeds are frequent, who need believe that an age of iron has succeeded? If the sex should be grateful to those who peril life and limb for them in the bloom of their youth and beauty, how should they regard those who desert them not, when sorrow dispels their attractive gaiety, when pale disease feeds on the damask cheek, and dims the sparkling eye.

17. APPLETON, MOSES: "Lecture Notebook." Harvard Medical School Archives.

18. KNIGHT, LOUIS W.: "Notes on Prof. N. R. Smith's Lectures on Surgery." University of Maryland Archives, Baltimore, 1866-67.

19. FITCH, W. L.: "Lecture Notebook. Surgical Lectures of Nathan Smith at Yale." Yale Archives.

20. MCGILL, THOMAS J.: "Notes on Prof. N. R. Smith's Surgical Lectures." University of Maryland Archives, 1853.

21. MAINSTER, SAMUEL: Lecture Notebook. "Medical Lecture of N. R. Smith." University of Maryland Archives.

22. "The American Medical Review and Journal of Original and Selected Papers in Medicine and Surgery," Vol. 11, Sept., 1825, No. 1.

Conducted by

John Eberle, M.D., Professor of Theory and Practice of Medicine in Jefferson Medical College.

Nathan Smith, M.D., Professor of Surgery and the Theory and Practice of Medicine at Yale College.

George McClellan, M.D., Professor of Surgery in Jefferson College.

Nathan R. Smith, M.D., Professor of Anatomy and Physiology in Jefferson College, and assisted by an association of physicians and surgeons. Philadelphia. Published quarterly by A. Sherman, agent, 120 Arch St., B. Wright, Printer.

23. HELM, JACOB: "Observations and Experiments on Human Digestion." Reported by Benjamin Waterhouse in 1808 in the Medical Repository. Translated by Samuel L. Mitchell from his *Zwey Krankengeschichten*. Vienna, 1803. *Camesinische Buch*. See note by Bruno Kisch in *J. Hist. Med.*, 10:230, April, 1955.

24. SHAFER, HENRY BURNELL, Ph.D.: *The American Medical Profession 1783 to 1850*. New York, Columbia University Press, London, 1936.

25. His complete bibliography by John R. Quinan is in *Medical Annals of Baltimore* (Baltimore, 1884), pp. 157-59.

26. GROSS, SAMUEL D.: *The Autobiography of Samuel D. Gross*. Philadelphia. 2 Vols. Vol. 1, pp. 385-87. Barrie, George.

27. The Shattuck Papers, Massachusetts Historical Society, Boston.

28. The best short accounts of both Nathan Smith and Ryno were written for the *Diction-*

ary of *American Biography* by Warfield T. Longcope, Ryno's great grandson.

29. SMITH, NATHAN: *Medical and Surgical Memoirs*, edited with Addenda by Nathan R. Smith, Baltimore, 1831.

An excellent note on the printing of the memoirs was published by Alexius McGlannon, M.D., in the *Bull. School Med. Univ. Maryland*, Vol. LX, 1924-25, pp. 138-42.

30. SMITH, NATHAN R., M.D.: "Surgical Anatomy of the Arteries." Professor of Surgery in the University of Maryland, in the Second Edition, Much Enlarged and Corrected, published by Wm. R. Lucas and R. N. Wight at Baltimore, 1825.

31. *The Boston Medical and Surgical Journal*, Vol. 111, No. 43, Tuesday, December 6, 1830, pp. 690-91.

32. SMITH, NATHAN RYNO: Manuscript Letter. Archives, Bowdoin College (to Parker Cleveland probably), Baltimore, September 25, 1830.

33. CORDELL, EUGENE FAUNTLEROY: *The Medical Annals of Maryland, 1799-1899*. Baltimore, 1903. Of Ryno, Cordell also says:

Dr. Smith was one of the greatest surgeons America has produced. . . . He extirpated successfully the parotid gland, "one of the most difficult procedures in surgery"; also the tonsils, testes, tongue and thyroid gland; he frequently performed the radical operation for hernia; he removed tumors of every kind and size; he operated successfully, for abscess of the cerebrum; tied the subclavian, carotid, external iliac, femoral, brachial and other arteries, also the internal jugular vein, excised the astragalus and inferior maxilla; amputated the limbs in all their parts, etc.

He was among the very first to perform subcutaneous section of the tendo achillis for club foot [1836]: [Strohmeyer introduced it in Germany in 1831]. About 1846 he devised a knife for division of strictures of the lachrymal duct, thus antedating Still- ing by many years. He devised instruments for seizing wounded arteries in the application of the ligature which Gross calls "ingenious contrivances." But Dr. Smith's reputation must rest chiefly on his lithotome and anterior splint. The former was first made known in the *Medical and Surgical Memoirs*, 1831 [probably from a design of his father's. Such an instrument is in the Historical Library at Yale]. In all, he performed the operation [for stone] about 250 times, all except the first three or four being done with it, and with a relatively small mortality [an amazing four percent]. A picture of this instrument is given in the "Memoirs" and also in the *Transactions of the Medical and Chirurgical Faculty*, 1878.

34. CALLCOTT, GEORGE. Personal Communication.

35. SMITH, NATHAN RYNO IV. Personal Communication.

36. CILEW, SAMUEL CLAGGETT: "Addresses on several occasions." Baltimore, 1906.

37. TOWNSEND, RICHARD H., merchant of Baltimore. "Diary." Copied from the manuscript in the Enoch Pratt Free Library of Baltimore City as a WPA project for the Archives of the Maryland Historical Society.

38. HINSDALE, GUY: "Doctors at the White Sulphur Springs," *Bull. Hist. Med.*, 13:585, May, 1943. As might be expected in a review of resident physicians, Ryno is not mentioned.

A Quarter - Century of Mercurial Diuretic Therapy

AARON FEDER, M.D., F.A.C.P.*

INTRODUCTION

ADVANCES in the medical sciences over the past quarter-century have probably been greater both in number and in importance than in any like period in world history. Physicians of our generation have been uniquely privileged to live and to work during this era. In assessing the relative importance of the many contributions of our time, one must be impressed by the fact that underlying many of the diagnostic and therapeutic developments has been the application of achievements in the basic sciences to the clinical management of patients. The effect that increased knowledge of renal physiology has had on practical therapeutics is an outstanding example. This increased knowledge has enhanced our ability to use diuretic agents in the treatment of edema. Organic mercurial compounds are probably the most widely used and most important of these drugs. It is the purpose of this paper to review the state of knowledge concerning these compounds as it existed in the 1930's, to summarize some 30 years of progress in our understanding of the pharmacologic and physiologic basis for their action, and to relate the contributions of the past three decades to clinical practices today. A group of chemically related compounds is now

available; their actions are understood, and so provide the knowledgeable clinician with a relatively safe and predictable therapeutic tool.

EARLY HISTORY

Mercurous chloride, calomel, has a diuretic effect that was known to Paracelsus over 300 years ago.¹ Its use for this purpose was revived by Jendrassik in 1886.² This diuretic property is common to all mercury compounds. These drugs, like many others, are enabled to exert their therapeutic power because their desired pharmacologic actions can be utilized before untoward or toxic effects supervene.

Mercury compounds owed their original importance to their use as anti-syphilitic agents. Novasurol, or merbaphen, the first of the therapeutic organic mercurials, was introduced for this purpose by Zieler in 1917.³ Its potent diuretic action became known by chance observation in 1920, at the Wenkebach Clinic of the University of Vienna.⁴ There, Johanna, a young girl with congenital syphilis, was admitted to the service of Dr. Paul Saxl because of vomiting and diarrhea. Alfred Vogl, then a third-year student and later a prominent New York City practitioner, was the clinical clerk in her case. He was instructed to administer salicylate of mercury for the treatment of the patient's syphilitic disease. His error in making out the pre-

*Clinical Assistant Professor of Medicine, Cornell University Medical Center, New York City.

Presented at Alumni Reunion, University of Maryland School of Medicine, June 6, 1963.

scription delayed delivery of the medication to the floor. Vogl, fearful of a reperimand, instead administered a pharmaceutical sample of Novasurol offered to him by a recently discharged Austrian army officer taking a refresher course at the Clinic. The profound diuretic effect of the drug was noted by the ward nurse, who called it to Vogl's attention. Having been properly impressed with this effect, he discussed it with Dr. Saxl, who attributed it to the fact that this compound induced shock upon a syphilitic kidney. The drug was next used in a hack driver with luetic heart disease, and the effect was equally dramatic. When the drug next showed its potency in a patient suffering from rheumatic heart disease, it became clear that another explanation for its diuretic action would be necessary. Vogl records that he left the Clinic in June of 1920 to continue his studies in Berlin. His work was carried on by Robert Heilig, who later collaborated with Saxl in the initial publication reporting the diuretic effects of the first organic mercurial compound.⁵

These drugs were first believed to act at the site of edema fluid accumulation, and therefore it was advocated that they be injected intraperitoneally or intrapleurally.¹⁻⁶ This, however, proved to be a most inefficient method of application. In 1928, when Goeverts removed a kidney from a dog during the height of diuresis and transplanted it into another dog, the diuretic action continued, thus proving that the kidney was the end organ for the drug's action.⁷ In 1932, Bartram further substantiated this conclusion by demonstrating that diuresis occurred only in that kidney whose renal artery was injected directly with an organic mercurial diuretic.⁸

In 1931, Chrometzka and Unger,⁹ in

Kiel, and in 1932, Gavazeni,¹⁰ in Pavia, and in 1934, Blumgart, Gilligan, Levy, Brown, and Volk,¹¹ in Boston, studied more precisely some of the physiological effects of these drugs. By 1934 it was generally accepted that diuresis resulted, not from increased glomerular filtration, but rather from decreased tubular reabsorption.

A departmental outline of the course in pharmacology, given at the Medical School of the University of Maryland in 1935,¹² groups the organic mercurial diuretics under the subheading of "Kidney Irritants." This outline emphasized that,

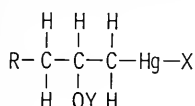
9. Kidney irritants

- a. Irritate tubules and prevent them from effectively eliminating water. May cause permanent injury- produce nephritis
 - (1) Kidneys concentrate volatile oils and eliminate them
 - (2) Heavy metals produce nephritis- can produce experimental nephritis with uranium acetate- specific.
- b. Calomel- useful in treating edema, anasarca and ascites.
 - (1) In duodenum- mercurous oxide- some mercury in the urine but not sufficient to produce efficient effects.
 - (a) Action- through strong cathartic action of drug causes water to be eliminated in the feces.
- c. Novesural, N.J.R.
 - (1) Organic mercury compound, introduced in medicine as an antisyphilitic
 - (2) Causes marked diuresis- irritant drug- must be used with great care
 - (3) When edema is of cardiac origin may be of some benefit in doses of 1 cc. of a 10 per cent solution intravenously. May also be given intramuscularly
 - (a) Used only as a last resort- when other diuretics have failed.

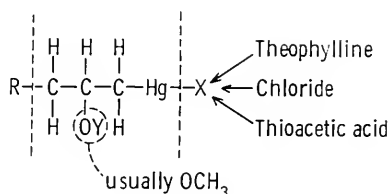
although these agents were capable of producing marked diuresis, they should be used with great caution. The notes stipulated that Novasurol, in dose of 1 cc. intravenously, might be beneficial in treating edema of cardiac origin. The outline cautioned that the drug *could* be given intramuscularly, but that it should be used as a diuretic of last resort and with utmost care. In contrast to this point of view, Modell,¹³ in 1961, referred to mercurial diuretics as the most potent and most dependable of diuretics and as being eminently safe.

CHEMICAL STRUCTURE¹⁴

Structurally, the organic mercurial diuretics are substituted compounds of mercurous propionic acid,



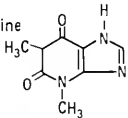
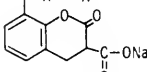
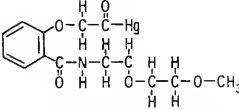
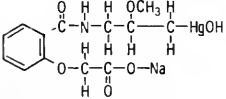
Additional groups:
acyclic
alicyclic
aromatic
heterocyclic



the pharmacologically important linkage being the C-Hg. This linkage is stable in alkaline solution. In acid medium it decomposes to release an ion of mercury which then combines with cell components.

In most of the compounds currently used, the X in the basic formula represents theophylline; in chlormerodrin or Neohydrin, a chloride ion; and in mercaptomerin, or Thiomerin, thioacetic acid.

Theophylline increases the solubility and absorbability of the compounds and decreases local irritation at the site of injection. Chlormerodrin is not only absorbed more readily from the gastro-

GENERIC NAME	PROPRIETARY NAME	CHEMICAL STRUCTURE	COMPLEXING AGENT
Chlormerodrin	Neohydrin	$\begin{array}{c} \text{H} & \text{H} & \text{H} & \text{H} \\ & & & \\ \text{NH}_2-\text{C}-\text{N}-\text{C}-\text{C}-\text{C}-\text{Hg}-\text{Cl} \\ & & & \\ \text{O} & & \text{H} & \text{OCH}_3 \end{array}$	None
Meralluride sodium	Mercuhydrin sodium	$\begin{array}{c} \text{ONa} & \text{H} & \text{H} & \text{H} & \text{OCH}_3 & \text{H} \\ & & & & & \\ \text{C}-\text{C}-\text{C}-\text{C}-\text{N}-\text{C}-\text{C}-\text{C}-\text{HgOH} \\ & & & & & \\ \text{O} & \text{H} & \text{H} & \text{O} & \text{H} & \text{H} \end{array}$	Theophylline 
Mercaptomerin sodium	Thiomerin sodium	$\begin{array}{c} \text{H}_3\text{C} & & \text{CH}_3 & & \text{H} & \text{H} & \text{H} \\ & & & & & & \\ \text{NaO}-\text{C} & \text{---} & \text{C} & \text{---} & \text{C} & \text{---} & \text{N}-\text{C}-\text{C}-\text{C}-\text{HgOH} \\ & & & & & & \\ \text{O} & & \text{O} & & \text{O} & \text{H} & \text{OCH}_3 \end{array}$	Sodium thioacetate $\begin{array}{c} \text{H} & \text{O} \\ & \\ \text{H}-\text{S}-\text{C}-\text{C}-\text{ONa} \\ \\ \text{H} \end{array}$
Mercurphylline sodium	Mercuzanthine	Same as in mercaptomerin	Theophylline
Mercumatinil sodium	Cumertilin		Theophylline
Merethoxylline procaine	Dicurin procaine		Theophylline and procaine $\begin{array}{c} \text{H}_2\text{N}-\text{C}_6\text{H}_4-\text{C}(=\text{O})-\text{O}-\text{C}(\text{H})_2-\text{C}(\text{H})_2-\text{N}(\text{C}_2\text{H}_5)_2 \end{array}$
Mersalyl sodium and theophylline	Salyrgein-theophylline		Theophylline

intestinal tract, but irritates it less than other compounds. The thioacetic acid compound, mercaptomerin, or Thiomerin sodium, is more readily absorbed and less irritating when given subcutaneously, and is also probably less cardiotoxic than the theophylline compounds.

The OY grouping is most commonly a methoxy group (OCH_3). This has no pharmacologic effect, but governs only the solubility of the compound. In most instances the solvent is methanol.

The R substituent affects both the diuretic activity and the toxicity of the compound. This grouping may be acyclic, allicyclic, heterocyclic, or aromatic, and is bound to the propyl chain by a carbon-to-carbon or carbon-to-amide linkage.

LOCALIZATION OF ACTION WITHIN THE KIDNEY

Observing that the rate of creatinine clearance was constant in mercurial diuresis, Blumgart and his group concluded that the diuretic effect was not the result of increased glomerular filtration. They demonstrated a measurable increase in the excretion of water, sodium, chloride, and potassium, and concluded therefrom that diuresis was dependent upon decreased tubular reabsorption.¹¹

The primary mechanism of diuresis derives from the increased excretion of sodium and chloride produced by their decreased reabsorption in the proximal convoluted tubules. This tubular fluid with its increased sodium concentration passes into the distal convoluted tubules where it curtails water reabsorption because of its increased osmolar concentration there. This mechanism was elaborated in the stop-flow technique experiments of Malvin, in 1957.¹⁵ In this important experimental method, the ureter of an animal is clamped so as to

raise the intra-ureteral and intra-renal pressure to equal the filtration pressure. The trapped filtrate continues to be affected by the cellular epithelium of the convoluted tubules. After six to eight minutes, the clamp is released and the urine collected in small serial samples, which are then analyzed for creatinine (an index of water reabsorption), para-amino hippuric acid (proximal segment activity), and electrolytes. The first samples are deemed to represent the urine as it is in the distal tubules, the subsequent ones in the proximal tubules.

Kessler,¹⁶ in 1958, observed a doubling of the sodium-creatinine clearance ratio after the administration of chlormerodrin. There followed no increase in sodium clearance in the distal tubules. He interpreted these data as indicating the site of action to be in the proximal convoluted tubules.

Giebisch,¹⁷ in 1958, demonstrated electronegativity within the lumina of the proximal tubules and regarded this as evidence of active sodium reabsorption. The electrical potential is diminished when rats are given chlormerodrin.

Duggan and Pitts, in 1950,¹⁸ calculated the maximum depression of tubular reabsorption by an organic mercurial diuretic to be between 17.1% and 21.4%. They suggested that this indicated that only a small section of the tubule is affected by the drug.

Neither the mechanism by which ions are transported across tubular epithelium nor that of inhibition of ion transport is known. Current speculation revolves around the possibility that the source of energy for such transport is normally an enzyme which can be blocked by mercury. This phenomenon is under current study.

It is generally accepted that active ion

reabsorption is confined to sodium, and that the chloride is passively retained in the tubular fluid to maintain ionic equilibrium. Some investigators, however, contend that active reabsorption applies to chloride, with sodium being the passive constituent of the tubular fluid.¹⁴ Evidence given to support the latter view is that repeated mercurial diuresis tends to produce hypochloremic alkalosis. When the serum chlorides fall below 90-95 mEq/L and the plasma bicarbonate rises above 30-35 mMol/L, further diuretic response ceases. In refutation, Pitts¹⁴ contends that this conclusion—that chloride reabsorption has been blocked—is unwarranted, since hypochloremic alkalosis can occur in consequence of the sodium-sparing function of distal tubules, wherein sodium is exchanged for potassium, ammonia, and hydrogen.

Mercurial diuretics do not modify the effect of anti-diuretic hormone upon renal flow.¹⁴ The increased excretion of water results from the osmotic demands of the increased concentration of sodium and chloride in the tubular urine.

BODY DISTRIBUTION OF DRUG

The availability of radioactively labelled materials and the development of techniques for their experimental use, not only opened new approaches for the study of renal physiology on the cellular level, but helped to provide additional insight into the distribution of organic mercurial diuretics in the body.

Following the intravenous injection of chlormerodrin in rats, and similarly, of Mercurhydrin in man, the distribution pattern of the drug in the various body compartments is predictable.^{19, 20, 21} Over 80% of the drug is removed from the plasma within 20 minutes. The drug is

then concentrated primarily in the renal cortex, whence it is excreted in the urine. During the first hour, the concentration within the renal cortex rises progressively to reach a plateau. As the drug is excreted in the urine, the plateau is maintained by additions to the renal cortex from temporary shortage depots in other tissues. Most of the drug is excreted in the urine. Some appears in the bowel, saliva, sweat, and milk. Somewhat less than one-third of that moiety excreted by the bowel enters the intestinal tract as a component of bile.

The rate of renal excretion is governed by both the chemical nature of the particular compound employed and by the route of administration. When the drug is combined with theophyllin or thioacetic acid, absorption is enhanced. Since these compounds are absorbed rapidly, they can be expected to appear in the urine rapidly. Chlormerodrin (Neohydrin) and mercumatilin (Cumertilin) are absorbed more rapidly from the gastrointestinal tract, and therefore excreted to a lesser extent by the bowel than the other compounds when given by mouth. Speediest excretion of parenterally administered drugs follows intravenous administration.

Sixty to eighty percent of the injected drug is excreted within 24 hours. Such rapid turnover avoids tissue accumulation from repeated injections unless oliguria or renal failure coexists. In either of the latter situations, repeated injections may result in the accumulation of mercury to dangerously toxic levels.

Farah,²² in 1948, demonstrated that certain monothiol compounds lessened the toxic effects of organic mercurial compounds. Cysteine and glutathione accomplished this without interfering with the diuretic action of the drug. BAL

lessened the toxicity of the mercurial but also counteracted its diuretic effect.

Following the administration of one to two ml. of the commonly used preparations (representing 40 to 80 mgm. of mercury), diuresis usually begins in two hours, reaches its peak in five hours, and then gradually lessens over the next 18 to 24 hours. The total diuretic effect in 24 hours is usually from two to four liters. In some instances diuresis may extend for a variable period beyond 24 hours.

ROUTES OF ADMINISTRATION

While mercurial diuretics are pharmacologically effective when administered intravenously and subcutaneously, they are best given intramuscularly. Subcutaneous injections are painful and may cause considerable local tissue reaction, even necrosis. Though the danger of necrosis is lessened when Thiomerin is selected, this preparation, too, produces much pain when given subcutaneously. Therefore, the subcutaneous route can neither be advocated nor, indeed, justified. Intravenous administration offers no therapeutic advantage over the intramuscular route and may be dangerous.

REFRACTORY EDEMA

Repeated administration of mercurial diuretics often leads to inability to respond to further injections. Schwartz and Wallace reported in 1951²³ that they observed this refractoriness to occur as a consequence of the chloruresis which produces hypochloremic alkalosis. They restored responsiveness by reestablishing normal blood chloride levels. Rubin, Thompson, Braveman, and Luckey²⁴ produced hyperchloremic acidosis and restored responsiveness in their patients who had become refractory to mercurial diuretics. They first employed ammoni-

um chloride and acetazoleamide (Diamox) for this purpose.^{24, 25} The ammonium chloride, in solution form to facilitate absorption, was given in amounts of 8 to 10 Gms. daily. The Diamox was given in single daily doses of 750 mgm. Plasma chloride levels as high as 129 mEq/L and plasma pH as low as 7.14 were achieved. When Diamox is given on the same day as the mercurial diuretic, it interferes with maximum diuretic response; they therefore discontinued this drug at least 24 hours before the mercurial was given.

A further refinement of this striking advance in the clinical application of mercurial diuretics resulted from the fruitful search for more palatable methods of establishing hyperchloremic acidosis. Rubin, Spiritz, Mead, Herrmann, Braveman, and Luckey²⁶ successfully substituted for the ammonium chloride, l-lysine monohydrochloride given in amount of 40 Gms. daily in four divided doses. A simple indicator of adequate hyperchloremia to assure diuretic response was found to be chloruresis in excess of 40 mEq. of chloride per liter of urine. It might be appropriate here, albeit incidental, to advise caution whenever the use of acidifying agents is considered in the presence of renal or hepatic failure.

Occasionally a patient with massive edema does not respond to intramuscularly administered mercurial diuretic drug, even though renal function is adequate and electrolyte balance is normal. This refractoriness may be due to lack of absorption of the drug, trapped in a large collection of edema fluid. This situation can be circumvented by injecting the agent into the deltoid rather than into the thigh or buttock. Pain of the injection can be reduced by giving half of the total dose into each arm. Once the fluid

has been mobilized from the lower part of the body, this area can be successfully used for future injections.

TOXICITY

Mercurial diuretics are locally irritating and painful. Given subcutaneously, they can produce serious tissue reaction and may cause necrosis with slough. Adding theophylline and thioacetic acid to the compound lessens the irritating effect. When taken orally these compounds may produce gastrointestinal irritation, rectal ulceration, and hemorrhage. Administration by rectal suppository, a modality no longer employed, has produced serious proctitis and colitis.

Repeated administration of mercurial diuretics can lead to dehydration and to serious disturbances of body electrolytes. Such complications can, in themselves, be life-threatening. Such therapy can, as previously noted, produce an electrolyte environment which prevents further response to the drug.

The allergic rashes occasionally resulting from the mercurial diuretic can often be circumvented by using another compound.

On rare occasions the intravenous injection of these medications has caused sudden death due to ventricular fibrillation.^{27,28} Such a catastrophe can be prevented by scrupulous avoidance of this route of administration.

When renal function is adequate, there is relatively great safety in the long-term repeated use of this class of drug. I have personally observed one patient who has received from 2 to 8 cc. of Mercuhydrin weekly for over 17 years. There is as yet no evidence of mercurialism or of impaired renal function after all this time. When, however, there is oliguria, or marked impairment of renal function,

repeated injections of mercurial diuretics can lead to the accumulation of mercury to toxic levels.

SUMMARY AND CONCLUSION

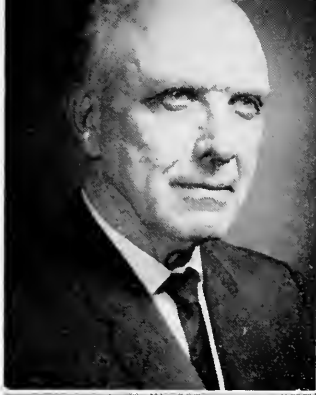
The subject of this essay is a notable example of the historical direction often observed in Medicine. A phenomenon was recognized in antiquity, soon forgotten, and then rediscovered centuries later. Impetus to the development of our modern knowledge of a most useful medication came from the chance observation falling upon the prepared mind. There followed, in the next quarter-century, an orderly elucidation of the pharmacologic knowledge of this important class of drugs, so that the clinician can now employ them with understanding and safety.

The final chapter has not been written. We must learn the mystery of cellular ion transport and the precise mechanism interrupted by mercury. The questions raised by these problems reflect our increasing curiosity concerning cellular structure and function. The kidney and that ancient metal may well serve key roles as the secrets of the cell continue to be unlocked.

References

1. VOGL, A.: *Diuretic Therapy*. The Williams and Wilkins Co., Baltimore, Md., 1953.
2. JENDRÁŠSEK, E.: Das Calomel als Diureticum, *Dtsch Arch. f. Klin. Med.*, 38:499, 1886.
3. ZIELER, KARL: Novasurol, ein neues Quecksilbersalz zur Syphilis behandlung, mit Bemerkungen über die Grundsätze Quecksilberbehandlung, *München med. Wchschr.*, 2: 1257, 1917.
4. VOGL, ALFRED: The Discovery of Mercurial Diuretics, *Amer. Heart J.*, 39:881, 1950.
5. SAXL, P. and HEILIG, R.: Über die diuretische Wirkung von Novasurol und anderen Quecksilberinjektionen, *Wien Klin Wchschr.*, 33:943, 1920.

6. KESSLER, RICHARD H.: The Clinical Pharmacology of Mercurial Diuretic Compounds, *Clin. Pharmacol. and Ther.*, 1:6, 723, 1960.
7. GOVAERTS, P.: Origine rénale ou Tisulaire de la Diurèse par un composé mercuriel organique, *Compt. rend. des Séances et Mem. de la Soc. de Biologie*, 99:647, 1928.
8. BARTRAM, E. A.: Experimental Observations on the Effect of Various Diuretics When Injected into One Renal Artery of the Dog, *J. Clin. Invest.*, 11:1197, 1932.
9. CIROMETZKA, F. and UNGER, K.: Untersuchungen über die Grösse des Glomerulusfiltrate unter dem Einfluss von Diureticis und Hormonen, *Ztschr. p. d. ges. exper. Med.*, 80:261, 1931.
10. GAVAZZENI, M.: Filtrato glomerulare e diuretici, *Policlinico (sez. med.)*, 39:236, 1932.
11. BLUMGART, H., GILLIGAN, B., LEVY, R., BROWN, M., and VOLK, M.: Action of Diuretic Drugs, *Arch. Int. Med.*, 54:40, 1934.
12. Course Outline, Department of Pharmacology, University of Maryland, Part II, John C. Krantz, Jr., Chmn., p. 146, 1935.
13. MODELL, W.: A Full Cycle of Diuretics, *Clin. Pharmacol. and Ther.*, 2:567, 1961.
14. PITTS, R. F.: The Physiological Basis of Diuretic Therapy, Charles C Thomas, Springfield, Ill., 1959.
15. MALVIN, R. L., SULLIVAN, L. P., and WILDE, W. S.: Stop Flow Analysis of Renal Tubular Localization, *The Physiologist*, 1:58, 1957.
16. KESSLER, R. H., HIERHOLZER, K., GURD, R. S., and PITTS, R. F.: Localization of Diuretic Action of Chlormerodrin in the Nephron of the Dog, *Am J. Physiol.*, 194:540, 1958.
17. GIEBISCH, G.: Electrical Potential Measurements on Single Nephron of the Necturus, *J. Cell. and Comp. Physiol.*, 51:221, 1958.
18. DUGGAN, J. J. and PITTS, R. F.: Studies on Diuretics. I. The Site of Action of Mercurial Diuretics, *J. Clin. Invest.*, 29:365, 1950.
19. THREEFOOT, S. A., RAY, C. T., BURCH, G. E., CRONVICH, J. S., MILNOR, J. P., OVERMAN, W., and GORDON, W.: Concentration-Time Course in the Plasma of Man of Radio-Mercury Introduced as a Mercurial Diuretic, *J. Clin. Invest.*, 28:661, 1949.
20. WESTON, R. E., GROSSMAN, J., LEHMAN, R. A., ULLMAN, T. D., HALPERIN, J. P. and LETTER, L.: Renal Extraction and Excretion of Mercury in Man Following Intravenously Administered Diuretics, *J. Clin. Invest.*, 30:1221, 1951.
21. BORGHGRAEF, R. R., KESSLER, R. H., and PITTS, R. F.: Plasma Regression, Distribution and Excretion of Radio-Mercury in Relation to Diuresis Following Intravenous Administration of Hg²⁰³ Labelled Chlormerodrin to the Dog, *J. Clin. Invest.*, 35:1055, 1956.
22. FARAH, A. and MARESH, G.: The Influence of Sulfhydryl Compounds on Diuresis and Renal and Cardiac Circulatory Changes Caused by Mersalyl, *J. Pharmacol. and Exper. Ther.*, 92:73, 1948.
23. SCHWARTZ, W. B., and WALLACE, W. M.: Electrolyte Equilibrium During Mercurial Diuresis, *J. Clin. Invest.*, 30:1089, 1951.
24. RUBIN, A. L., THOMPSON, H. G., BRAVEMAN, W. S., and LUCKEY, E. H.: The Management of Refractory Edema in Heart Failure, *Ann. Int. Med.*, 42:358, 1955.
25. LUCKEY, E. H., and RUBIN, A. L.: Correction of Hyponatremia in Congestive Heart Failure, *Circulation*, 21:229, 1960.
26. RUBIN, A. L., SPRITZ, N., MEAD, A. W., HERRMANN, R. A., BRAVEMAN, W. S., and LUCKEY, E. H.: The Use of l-Lysine Monohydrochloride in Combination with Mercurial Diuretics in the Treatment of Refractory Fluid Retention, *Circulation*, 21:332, 1960.
27. VOLINI, I. F., LEAVITT, R. O., MARTIN, R.: Studies on Mercurial Diuretics, *J.A.M.A.*, 128:12, 1945.
28. BARKER, M. H., LINDBERG, H. A., THOMAS, M. E.: Sudden Death from Mercurial Diuretics, *J.A.M.A.*, 119:1001, 1942.



Dean's LETTER

MEDICAL SCHOOL SECTION

*Dear Members of the Medical Alumni, Students and
Friends:*

The Medical School is continuing its study of the curriculum, teaching, student evaluation and grading, and faculty-student counseling.

Beginning in October the Faculty Curriculum Committee will be made up of seven experienced faculty members elected by the Faculty Board from candidates nominated by the Heads of Departments. The Associate Dean for curriculum and instructional procedure will act as Chairman of the Curriculum Committee to provide continuity of effort and administration.

The members of the Curriculum Committee will not represent their departments but the faculty at large. This type of representation will allow the individual to view the curriculum and instruction from the over-all needs of the student.

It is hoped that in the future departmental special interests will be better blended into a coordinated program of instruction that will allow the optimum development of the student as a physician.

Arrangements are being made to obtain a resourceful individual, with experience in education, on a full-time basis, to aid the committee in its study of the curriculum and other factors involved in the educational program.

The committee will continue to work closely with the Association of American Medical Colleges and keep informed about the educational programs in other medical schools.

Sincerely,

WILLIAM S. STONE, M.D.

Dean

Davidge Hall Improvements

DURING THE SUMMER of 1963, extensive refurbishing of Davidge Hall has been carried out. In line with an established policy of the School of Medicine to maintain historic Davidge Hall as a monument to American medical education, periodic repairs and refurbishments have been carried out during the past two decades.

This year extensive repainting, replastering, and modernization of the electrical system have been completed, along with the replacement of numerous worn floors and installation of new electrical fixtures where indicated. Last year the office of the Associate Dean was completely refurbished in conformity with the Federal period which the old building represents.

University Receives Grant for Shock and Trauma Study Center

THE NATIONAL INSTITUTES OF HEALTH have recently granted the University of Maryland a sum of \$800,000 for the construction of a center for the study of shock and trauma. Because such health research grants require matching funds, the University must raise an equivalent amount which will result in a center costing better than one and a half million dollars. The center will be under the direction of Dr. R. Adams Cowley of the Department of Surgery.

Already in operation is a pilot unit which has been in operation for several months, utilizing support from the office of the U.S. Surgeon General. The Hilgenberg Foundation donated \$25,000 toward the program and the Dixie Manufacturing Co. of Baltimore also assisted

by constructing an operating chamber at a cost of \$34,500.

The new center is planned to bring all resources of the hospital to the patient in shock, as well as the latest experimental and technical procedures. The unit will ultimately provide eight beds for patients in shock and another eight for convalescents. There will be a centralized monitoring system which will also record and tabulate data for later study. Operating rooms and laboratories for basic studies will be included. A high pressure operating chamber will be a part of the basic equipment.

Department of Psychiatry Receives Large Grant

DR. JACK RAHER, Research Assistant Professor of Psychiatry, has received a grant of \$90,000 from the National Institutes of Health for investigation of the adrenal gland response to emotional arousal.

Dr. Raher will conduct studies correlating mood changes in anxiety, depression, and anger with changes in the output of hormones by the adrenal cortex.

Recent work in this field supports the idea that the adrenal gland responds to emotional arousal and that breakdown products of adrenocortical hormones which may be recovered in the urine provide an accurate index of emotional intensity.

Dr. Raher has developed certain objective methods to study these reactions. He will be assisted in the investigation by Dr. Jacob B. Chassan, statistical consultant, and Dr. David B. Turner, head of the research biochemical laboratory at the Sinai Hospital of Maryland.

Faculty

NOTES

Department of Anatomy

DR. FRANK H. J. FIGGE has announced the appointment of two new members to his staff in the Department of Anatomy.

DR. JOSEPH WELLS, Assistant Professor of Anatomy, is a native of Boston, Mass. He completed his undergraduate work in Biology at the University of Rhode Island and received his Ph.D. degree in Anatomy at Duke University. Dr. Wells has held Pre- and Postdoctoral Research Fellowships from the National Institute of Neurological Diseases and Blindness in support of his studies on the hypothalamo-neurohypophysial system and on the uptake and distribution of dl-cystine-S-35 in water-deprived animals. He has taught in the Departments of Anatomy at Duke University and at Yale University. Dr. and Mrs. Wells and their two children arrived in Baltimore during the summer.

DR. JUAN ANILANE joins the staff as Instructor in Anatomy. Dr. Anilane majored in Biology and Chemistry at Western Michigan University and in Human Anatomy at the University of Michigan where he received his baccalaureate degree. He received his Ph.D. degree in Zoology at Rutgers University where he developed his research program in Endocrinology leading to publications on age-hormone relationships. Following active duty in the U.S. Army, Dr. Anilane taught in the Biology Department of Western Michigan University, served as a Research Assistant with the Upjohn Co. in Kalamazoo, and at the Bureau of Biological Research at Rutgers University in New Jersey. He held

a Predoctoral Fellowship while earning his Ph.D. degree at Rutgers. Dr. Anilane and his wife (who also holds a Ph.D. in Zoology) will move to Baltimore early in September.

Activities of Department of Dermatology

MEMBERS of the department have completed a text entitled "Patients Protocol," completed in co-operation with a committee of the International Congress of Dermatology. This volume has been distributed to each of the more than 2,000 dermatologists in the United States, the various medical libraries, and to professors of Medicine in each of the medical schools in the country.

On May 3, Dr. Harry M. Robinson, Jr., Professor of Dermatology, spoke at the Student American Medical Association in Chicago. Later on May 16, he delivered a lecture to the Iowa State Medical Association Postgraduate Assembly. In conjunction with Dr. Louis E. Harmon, Dr. Robinson presented a paper before the American Dermatological Association entitled "Multiple Lipoidal Histiocytoma." Dr. Francis A. Ellis presented a paper before the American Medical Association entitled "Cryoglobulinemia Applied to Dermatology."

Dr. Joan Raskin of the department has just completed an article entitled "Fluorescence Microscopy in the Study of Tissue Antigen Antibody Reactions."

A dermatology symposium is being planned for the postgraduate group in October of 1963. In November, 1963, Dr. Dunseath and Dr. Robinson will present an exhibit before the Southern Medical Association; while in December, Dr. Harmon of the department will also present an exhibit entitled "Pigmentation" before the American Academy of

Dermatology. Dr. Robinson will again speak before the Academy in December on the subject "Rehabilitation of Patients with Occupational Skin Diseases," and will preside at a round table discussion at this meeting. Dr. Francis Ellis will be on the panel of Dermal Pathology.

Dr. Vernon E. Krah1 to Lecture in Philadelphia

DR. VERNON E. KRAHL, Professor of Anatomy, will present a paper entitled "Living Pulmonary Histology," on the occasion of the Hahnemann Medical College Symposium on Aging of the Lung. The Symposium will be held on Monday, Tuesday, and Wednesday, November 18-20 in Philadelphia. Dr. Krah1 will be a part of a panel on "Biochemical and Structural Changes in the Aging Lung."

Dr. Cowley Speaks at 1963 Heart Association Sessions

DR. R. ADAMS COWLEY, Professor of Thoracic Surgery in the School of Medicine, spoke at the scientific session of the Heart Association of Maryland on the subject, "Hyperbaric Oxygen."

Dr. Hull on Important Eastern Mission

DR. HARRY C. HULL, distinguished surgeon and Professor of Clinical Surgery in the School of Medicine, was summoned on June 18 by the government of the Kingdom of Jordan to operate upon the ailing Prime Minister of the Middle Eastern kingdom.

Dr. Hull, who performed the surgery and remained during the early stages of the convalescence of this important patient, was in the Kingdom of Jordan from June 18 to 25. Later Dr. Hull was

decorated by his Majesty, King Hussein of Jordan.

Department of Radiology Receives Large Grant

THE NATIONAL INSTITUTES OF HEALTH have awarded a three-year grant of \$199,375 to University Hospital's division of Radiology for continuation of clinical trials of a new technique developed at the hospital in the treatment of bronchogenic carcinoma through the use of Cobalt 60 radiation prior to surgery.

DR. FERNANDO G. BLOEDORN, Professor of Radiology and head of the radiotherapy division, has been collaborating with Dr. R. Adams Cowley, Professor and head of the division of Thoracic Surgery, in the development of this technique and will direct its continued trial at the hospital.

Dr. Bloedorn has reported preliminary findings indicating that preoperative radiation in 192 patients modified otherwise inoperable tumors so that operation could be performed. Follow up of the group from two to six years indicated a survival rate among patients regarded as hopeless to be exactly the same as those who ordinarily would have been considered as good operable risks.

Members of Dermatology Department Honored

DR. HARRY M. ROBINSON, JR., Professor of Dermatology, and members of his staff, including Dr. William Dunseath, Assistant Resident in Medicine in Dermatology, and Dr. Eugene S. Bereston, Associate Professor of Medicine in Dermatology, were cited recently by the American Medical Association for their exhibit entitled "Pathogenic Fungi of North America."

The Challenge to the Physician— A Contemporary Perspective*

JAMES A. SHANNON, M.D.**

IT IS POSSIBLE to indicate, but not to describe, the sense of honor I feel in sharing this occasion with you. Its significance extends beyond the justifiable pride that each of you feels: it is the significance of furthering a noble tradition, of formally acknowledging capability to practice medicine. Further, it symbolizes capability at an unsurpassed level, at a time when man's greater potentialities are so critically poised. The graduation of a class of physicians has always been an individual and institutional achievement. Today it is a vital national and, indeed, international gain.

For those of you who are commencing your medical careers, I should like to view these from the perspective of an administrator of medical research (long since a physician and working scientist). Such an overview may offer something of value for those who will practice a profession grounded in the medical sciences. Perhaps I may begin by reflecting on broad trends of the past quarter century which are changing appreciably the physician's role. Oliver Wendell Holmes testified to this approach in saying, "I find the great thing in this world is not so much where we stand as in what direction we are moving."

Looking back, one sees an outstanding trend in the acceleration of the rate

of acquisition of new knowledge. This is impossible to quantify. Yet the knowledge and materials gained prior to 1850 were at least doubled by 1900, more than doubled again by the start of World War II, and at least again since. If this is too crude a measure, I will supply a few broad examples of medical progress that have occurred in my own time.

In the field of therapeutics alone, one thinks immediately of the number of essential nutrients; two revolutions in antibacterial agents—the sulfonamides, then the antibiotics; important hormones including those of the adrenal cortex; oral antidiabetics; the tranquilizers; anti-hypertensives; anticoagulants; many agents useful in cancer and neurological diseases; and a wholly new technology of anesthesia.

Preventive medicine gained fluoridation of public water supplies and many bacterial and viral antigens.

Surgery and diagnostic technology have made fantastic strides. Today's operations for the repair and reconstruction of organs would have been rejected by my professor of surgery as ridiculous to think about.

Finally, we have gained a far better understanding of disease mechanisms which defies summary treatment.

Sweeping and fundamental changes in clinical practice have followed these advances. Above all, the physician's effectiveness has been enormously increased. This, in turn, has resulted in major shifts

* Precommencement address, School of Medicine, University of Maryland, Baltimore, Md., June 7, 1963.

** Director, National Institutes of Health, Public Health Service, U.S. Department of Health, Education, and Welfare.

in the mortality picture and the age grouping of the population. Much has been said of these changes and I mention them only in passing. But the physician has also been affected in a way less often noted—through the far greater complexity of clinical practice and the mounting difficulty of keeping abreast of new developments.

A vastly expanded body of knowledge, greater effectiveness of the physician, and broad social changes have led to certain modifications of the physician's role. The increase in specialization is prominent. This has occurred as a result of the concentration of population in urban areas and the advantages of limiting one's field, notably enhancement of one's abilities. A corollary development has been the general practitioner's increasing referral of complex problems to the specialist, with concomitant responsibilities in the management of cases. To some extent, then, the trend toward specialization is an adjustment to scientific progress.

Accompanying these trends have been outstanding changes in the patient-physician relationship. Social developments, urbanization, the shift in practice from bedside to office, more institutional medicine, and the system of specialization have all tended to depersonalize the relationship. I am not one who deplores this tendency; I see it not only as an inevitable consequence of social changes, but as a step toward greater integration of medical and social resources within the community. The modern physician must function effectively in a complex of hospitals, schools, laboratories, specialized health agencies, and referral situations. But a growing sense of having found better ways to fulfill his mission has encouraged him to accept and even seek the new orientation. Out of a role once highly individualized—oriented to

the patient in a family context—has emerged a social responsibility to meet the medical needs of the community from which many of his resources are drawn as well as to render personal service.

The physician has always been obligated to keep abreast of emerging practical knowledge, and to utilize it well, or see that it is utilized, on behalf of his patients. I think of this as the *obligation to know*. It has particularly important implications for anyone embarking on a medical career at this time.

I believe the broader implications will be obvious if we face the simple fact that most of you will be practicing medicine into the next century. Scientific advances will have continued, and much of what you have learned up to now will be greatly modified. "The most vivid truth of our age"—to quote Margaret Mead—"is that no one will live all his life in the world into which he was born. . . ." We might speculate generally on the direction of changes over the next 35 years or so.

Certainly we will reap rewards of current research programs, public and private. Manifold expansion of the research base, largely during the time you have been in college and medical school, has probably accelerated medical-science capability by about a decade. The quickened pace of new findings will continue, and the pool of knowledge, tools, and techniques available to the physician will continue to grow rapidly.

The nature of the change in clinical medicine may be expected to follow a characteristic pattern. It is reasonable to say that no knowledge is ever lost; a fact gained remains a fact, and tools for the most part are merely improved. But what is considered an adequate definition of a disease entity today will no longer obtain tomorrow.

The major problem that each of you will face in a very personal way stems from the fact that the amount of knowledge available for application to a disease situation has grown to the point where the physician is finding it increasingly difficult to utilize individually the bulk of diagnostic and therapeutic procedures available in the best interest of his patient. And I truly believe we are just at the beginning of a period of very rapid medical advance.

Epidemiology, now applied to non-infectious as well as to infectious diseases, is deriving new vigor from automatic data processing and other techniques for extending the scope of medical science. The skills of the biometrician, supplementing those of the laboratory and clinical investigator, are providing valuable information in cardiovascular diseases, the arthritides, neurological diseases, and cancer. Such approaches do not generally give final solutions to health problems, but they can be expected to isolate causal and contributory factors for later and definitive exploration.

Modern advances in biochemistry have rapidly extended our depth of understanding of cellular phenomena and the integrated systems on which some of these depend. Such information combined with new abilities to translate the findings to the total organism in health and disease continue to expand our fund of basic knowledge at a tremendous rate. Much of this investigation is addressed to fundamental aspects of the life processes. It will eventually move more directly into the theater of disease. Meanwhile the same approaches will yield an array of new drugs to tide us over.

An even deeper penetration into the life processes will come from the field of physical biology. As physicists, physical chemists, and mathematicians turn

their models of thought and instruments of precision to the living world, we are gaining a better understanding of the nature of intracellular reactions and the complex mechanisms involved. Already we have an array of definable "molecular diseases," some insight into the mechanics of protein synthesis and cell replication, and, at the very least, an understanding of the framework in which genetic information is stored and retrieved for transmission. The consequences of these advances to our understanding of human disease are probably beyond our present comprehension.

Ten years from now our current understanding of viruses and their interplay with cells in the production of disease will appear primitive in retrospect. As a practical matter, in 20 years many viruses will have yielded specific antigens for the prevention of a number of diseases not yet suspected, much less classified, as being of viral origin.

The fields of psychiatry and neurology will continue to converge through fundamental studies on the brain and its functional architecture, the nervous system, the learning process, memory, and our cognitive faculties generally. The results of such studies, together with a broad-based understanding of relevant behavioral sciences, will eventually help to clarify the psychoses, a variety of emotional disorders, and such complex, devastating problems as alcoholism and drug addiction. As knowledge emerges, it will have to be applied both to individuals and groups. A broadened approach through modification of group dynamics will be essential to the solution of serious problems of adolescent and adult behavior.

As a prelude to this, the behavioral sciences will have found a firm base in the preclinical years, not as an introduc-

tion to psychiatry presented by psychiatrists but rather as a group of increasingly important fundamental sciences which, together with other preclinical sciences, will give our student of tomorrow a broader base for the understanding of the emotional, intellectual, and biological development of the individual.

Without attempting to press the crystal ball too far, I think one could safely predict that these changes will lead to important adjustments in the medical profession. What form are those likely to take? Perhaps we should expect further increases in specialization, group practice, community health services, institutional medicine, and services to physicians. I see no harm in such prospects if they evolve spontaneously. There does seem a limit, however, to which certain trends can go. Some have already exceeded reasonable bounds, such as the lengthening of medical education, dependence on the drug trade for instruction, gravitation of physicians toward centers of population, and simple proliferation of the professional literature. If the physician is to become increasingly effective, he must apply himself to dealing with these trends or at least holding them in check. He will not be alone in his task, for many institutions and associations share his concern.

Most certainly, then, the physician will be simultaneously blessed and beset with innovations that increase his "obligation to know." I have no specific plan to offer by way of helping the physician meet this situation. However, I would make a few general observations that might suggest approaches.

If we accept the premise that physicians must somehow keep abreast of a rapidly advancing, practical frontier of knowledge—must develop more efficient means for doing so—then the absence of

any formal recognition of the need is conspicuous. One would expect to see a firm, clear response on the part of the profession—a consensus for some uniform evidence of renewal of knowledge and skills. This might take the form of a periodic relicensing of physicians or a mandatory program of study.

Concurrently, the practitioner must find the time—say, through opportunities for sabbatical leave—in which to learn and perhaps participate in teaching activities. Programs to alleviate the national shortage of medical manpower should take this into account.

Where should we look for action in this general area? Obviously, the profession itself—the leaders among physicians and medical educators—must take the initiative in developing a system for the continuance of education. This should encompass the entire spectrum of needs: evaluation of findings, demonstrations, teaching, communication, and formal standards and requirements. Like the creation of new schools, board examinations, and so forth, the development of opportunities for continuing medical education will require concerted action within the ranks.

I needn't dwell on the excellent proposals nor the impressive array of technological aids to teaching and communications that are already available for an educational program such as we all must advocate. But I should like to stress that the need is not for mere information, nor for technical devices to convey it. It is a need for development of new teaching-learning situations.

The tradition of medicine dictates that effective programs for keeping up with new knowledge shall be established. Their evolution, though sporadic, is already apparent. If somehow they do not mature—if the physicians of tomorrow

do not fully accept their "obligation to know"—then most certainly an informed public will become a compelling force, with many undesirable consequences. I believe, however, that we will gradually, as part of an evolutionary process, assimilate the concept that medical education of a highly developed, fairly systematic kind must be continuous throughout the medical career.

Such a concept and the programs to implement it will have several broad effects. One, they will help to close the present gap in the spectrum from research to practice. Two, they will assure the physician of the most up-to-date useful knowledge and techniques by

which to augment his efficiency. Three, they will result in better feedback of important information to the research community. And four, they will bring institutions and industry into the advancement of medicine in constructive new ways.

In summary then, the challenge to the physician of today and tomorrow is to maintain, in a rapidly evolving medical technology, the individual competence which warrants the position Robert Louis Stevenson assigned to him when he said, "There are men and classes of men that stand above the common herd, . . . the physician almost as a rule. He is the flower (such as it is) of our civilization."

Obituaries



Howard Matheson Bubert
1897-1963

Howard Matheson Bubert was the second son born to the late Dr. Charles Henry and Blanche Leiter Bubert on March 10, 1898. His father was graduated from the College of Physicians and Surgeons in the class of 1888. His mother was descended from an early, prominent Western Maryland family.

Howard received his premedical education in private schools and at the Baltimore City College before his graduation from the School of Medicine of the University of Maryland in 1920—the year of the amalgamation of the College Park Schools with the older Baltimore schools to form the present University of Maryland. His formative years in the medical profession had therefore paralleled the earlier growth of the present medical school and the distinguished career of

this alumnus has honored the growth of his alma mater through his many facets of productivity.

In his preparation for the practice of Internal Medicine, Howard interned at the Maryland General Hospital and the Elizabeth Steel Magee Hospital in Pittsburgh, Pa. In 1923, he was appointed an Assistant in Medicine in the School of Medicine, an Instructor in 1925, and two years later an Associate in Medicine and an Instructor in Pathology. Continuing as an Associate in Medicine, in 1932 he was made an Assistant in Bacteriology. An Assistant Professorship of Medicine in 1932 preceded his appointment as Associate Professor of Medicine, in 1947.

The development of the Department of Allergy which began about 1925 was his original idea. He promoted extensive research and published about 30 manuscripts in this field. In 1947 he became a Fellow in The American Academy of Allergy. For these reasons he became an authority of national recognition in this work and enjoyed a very large private practice in his specialty. On March 24, 1959, he resigned as Chief of the Allergy Clinic due to an illness from which he had never fully recovered.

On October 23, 1945, the Faculty Board of the School of Medicine created the Committee on Postgraduate Courses and Howard served as Chairman of this Committee until July, 1960. He was known as "Mr. Postgraduate" in his tireless efforts given at great sacrifice to his well being.

In chronological order the Medical and Chirurgical Faculty received his val-

MEDICAL SCHOOL SECTION

uable services. These activities included the following:

- 1935—Reception Committee
- 1940, 1941, 1942—Legislative Committee
- 1949—Committee on Public Instruction
Committee on Prepayment Medical Care Plan
- 1955—Councilor
Delegate to American Medical Association
Fact Finding Committee to Investigate Postgraduate Education
- 1956—Fact Finding Committee to Investigate Postgraduate Education
Councilor
- 1957—Councilor
Fact Finding Committee to Investigate Postgraduate Education
- 1958—Nominating Committee
Vice-Chairman, Council
Committee on Finance and Budget
The House Committee
Advisory Committee to the Woman's Auxiliary
- 1959—Councilor

He also served as Medical Examiner to the Commissioner of Motor Vehicles from 1931 to 1935, and Medical Examiner for the Maryland State Police from 1935 to the time of his death on July 13, 1963. He also was founder and President of the Maryland Classified Employees Association. In 1935 he was Chairman of the Baltimore Chapter of Red Cross Disaster Preparations and Relief Operations and in 1954 organized a state-wide ambulance evacuation corps.

About each of these activities much could be written. His unique position with the Maryland State Police is perhaps the first instance in Maryland law where an act was passed naming a personality. (Section 5, Chapter 303, State of Maryland 64A, effective June 1, 1935.) This law is written as follows: "Dr. Howard M. Bubert attached to Commissioner of Motor Vehicles shall be transferred to the Department of Maryland State Police as Examining Physician of the Department of Maryland

State Police and shall not be attached to the Commissioner of Motor Vehicles."

His position was thus made subject to the Merit System to protect it from domination by partisan politics. This was perhaps the first formal department of medical affairs in state constabularies, and his particular plan and ideas have been copied by other states. On occasion he was consulted by other states in the formulation of their state police medical services. His position and policies were vigorously attacked by politicians and even by individuals within the force, particularly during the years of 1935 through 1937. He was an avowed non-conformist and successfully defended his stand without compromise.

Throughout his life he had been handicapped by a rheumatic aortic stenosis and by 1959 had stubbornly utilized his reserve potential against the advices of his personal physician and friends. Finally several episodes of heart failure brought this life to a close. His hobbies were his family and his life and work at Maryland State Police. Howard rarely took a vacation.

In the appraisal of the life of this man after many years of close personal and professional friendship, we can say he was a good doctor; kind, sincere, and loyal to friends and patients. He practiced a code of ethics on the highest plane. He was a nonconformist in political affairs, both professional and partisan, where in his opinion, the patient or profession might be in jeopardy.

In the memories of his fellowship, ennobled by his service to his patients, friends, and profession, there is a measure of human worth as he takes his place among the great and noble of his time.

CYRUS F. HORINE, M.D.



James Tolly Marsh

1894-1963

ON JANUARY 4, 1963, Carroll County lost by death Dr. James Tolly Marsh, a devoted family physician and dedicated citizen. Maryland citizens share in this loss because of his contributions to the health and welfare of the state as a whole.

James Tolly Marsh was born in Union Bridge on September 17, 1894, the son of Rev. John Tolly Marsh, Methodist Minister, and Sarah Estelle Watt, daughter of Dr. James Watt. He attended Carroll County schools, later entered Western Maryland College, and was awarded his B.A. Degree in 1916. His education was interrupted by Army service during World War I, when he served his country in France with Company C of the 112th Machine Gun Battalion. Later he entered the University of Maryland School of Medicine, completing successfully his studies for his medical degree in 1924. During medical school years, he received practical training which he extended by serving as a

house officer in the University Hospital, Baltimore, Md.

Jim Marsh was the epitome of the good family physician. The patient's disease at the bedside and the environmental factors in the family setting which contributed to illness were his complete responsibility. Never did he shirk the total problem; indeed, he understood and practiced comprehensive medical care. Calls for help were answered faithfully night and day. He was a perceptive historian and diagnostician, with a keenness for perceiving a problem practically. On the many occasions when he relinquished the care of his patient to a hospital or consultant, it was apparent that he possessed an uncanny ability to surmise that a serious problem was at hand. Jim Marsh was never willing to guess or temporize when the medical pattern was obviously serious or uncertain. He sought medical consultative assistance on many occasions and it was his nature to belittle or minimize his own capabilities. Actually, his contribution was paramount, always practical and to the point.

His patients recall warmly the frank way in which he spoke, his unhurried, unruffled manner, his practice of sitting in the home just to talk, and his fondness for an anecdote. Always a good talker, he never spoke boastingly of himself. One of his medical associates and close friend speaks frankly of him as a "squareshooter."

Busy as he was, Dr. Marsh took time from his arduous duties as a country doctor for other professional activities. Active in the affairs of medical societies, he met faithfully with his associates in Carroll County and served as their delegate to the Maryland Medical and Chirurgical Faculty. He served the State Society with distinction and in 1957 was

MEDICAL SCHOOL SECTION

elevated to the post of vice president. He held membership in the American Medical Association.

The Council of Medical Care of the State Department of Health profited by his counsel for eight years. His alma mater, the University of Maryland School of Medicine, called upon him for service which he never shirked; he served for many years as Secretary-Treasurer of the Medical Alumni Association for Carroll County. Appointed to the Faculty of Medicine as Lecturer, Dr. Marsh brought the wealth of his general knowledge and practical experience to the hospital by talking informally to groups of house officers and medical students.

For 23 years, Dr. Marsh was Deputy Medical Examiner for Carroll County and a member of the staff of the Carroll County General Hospital, having been elevated to its vice presidency before his death. Many Baltimore hospitals and physicians are in his debt for his referral of patients with interesting medical problems throughout his years of practice.

Dr. Marsh commanded the full respect of his fellow citizens since he contributed much beyond the confines of his profession. He participated enthusiastically in affairs of the Rotary Club, the Westminster Chamber of Commerce and the Westminster Methodist Church. He was a Director of the Carroll County National Bank. As a member of the Masonic Order, he achieved the Thirty-second Degree and was Past Master of the

Plymouth Lodge 143, Union Bridge. His memberships extended into the Carroll Post, American Legion, and Moleville Farm Post 467, Veterans of Foreign Wars. During World War II he worked actively with the Carroll County Draft Board.

In addition to the warmth of his family life, one of Dr. Marsh's diversions was a love of riding which occasionally provided him relaxation from his medical duties. His main life interest was his service to humanity and the rendering of proper attention to patients under his care.

The medical profession of Carroll County will remember Jim Marsh as an outstanding medical practitioner, a true family doctor, who found time to extend himself beyond his patients to needs of the community and state. He will be especially missed by his fellow citizens much as a distinguished predecessor, Dr. Henry M. Fitzhugh. The death of Jim Marsh inspires that type of sorrow among friends and patients which is reserved for special people. He will be remembered affectionately for many years.

To Mrs. James T. Marsh and members of his family, the University of Maryland Hospital and School of Medicine tenders its profound sympathy and acknowledges with pride the humble and wholesome way of life which typified this fine physician.

THEODORE E. WOODWARD

Invest in the future health of the nation and your profession

Give to medical education through AMEF

American Medical Education Foundation



535 N. Dearborn St.
Chicago 10, Ill.

POSTGRADUATE COMMITTEE SECTION

PATRICK B. STOREY, *Chairman and Director*

ELIZABETH B. CARROLL, *Executive Secretary*

Postgraduate Office: Room 201

Davidge Hall, 522 West Lombard Street, Baltimore 1, Maryland

Postgraduate Courses for the 1963-64 Academic Year

THE FOLLOWING COURSES are scheduled for the remainder of the academic year. Complete information may be obtained from the office of the Postgraduate Committee, School of Medicine, University of Maryland, Baltimore 1, Md.

CLINICAL CARDIOLOGY. November 14, 15, 16, 1963. Limited to 30 students. Fee \$60.00.

ADVANCES IN MEDICINE. November 20 and December 4, 1963 at Washington County Hospital. Fee \$30.00.

NEUROPATHOLOGY FOR PATHOLOGISTS. December 2-7, 1963. Under the direction of Dr. John A. Wagner. Course limited to 12 students. Fee \$125.00.

INDUSTRIAL MEDICINE. December 11, 1963. Under the direction of Dr. Walter E. Fleisher. Fee \$15.00.

CLINICAL ANATOMY. February 3 through May 27, 1964. Under the direction of Dr. Otto C. Brantigan. Course limited to 15 students. Fee \$150.00.

ADVANCES IN MEDICAL SCIENCE. January 9 through March 26, 1964. A bi-weekly series of lectures under the direction of Dr. Patrick B. Storey. Fee \$40.00.

SURGICAL PHYSIOLOGY. January 22, 1964. Under the direction of Dr. Arlie R. Mansberger. Course limited to 30 students. Fee \$15.00.

PRACTICAL DERMATOLOGY. February 5, 1964. Under the direction of Dr. Harry M. Robinson, Jr. Limited to 30 students. Fee \$15.00.

OBSTETRICS. February 19, 1964. Under the direction of Dr. Edmund Middleton. Limited to 30 students. Fee \$15.00.

DIABETES. March 11, 1964. Under the direction of Dr. Charles E. Shaw. Limited to 30 students. Fee \$15.00.

HEMATOLOGY. March 18 and 25, 1964. Under the direction of Dr. Milton S. Sacks. Limited to 25 students. Fee \$40.00.



OFFICERS

President

GIBSON J. WELLS, M.D.

President-Elect

J. HOWARD FRANZ, M.D.

Vice-Presidents

LOUIS DALY, M.D.

VINCENT DAVIS, M.D.

ARCHIE R. COHEN, M.D.

Secretary

FRANCIS J. BORGES, M.D.

Treasurer

HOWARD B. MAYS, M.D.

Executive Director

WILLIAM H. TRIPLETT, M.D.

Executive Secretary

MRS. LOUISE GIRKIN

Board of Directors

THEODORE E. WOODWARD, M.D.

F. FORD LOKER, M.D.

NATHAN E. NEEDLE, M.D.

HAROLD P. BIEHL, M.D.

RENNERT M. SMELSER, M.D.

JOSEPH D'ANTONIO, M.D.

WILLIAM SUPIK, M.D.

HUGH McNALLY, M.D.

EMMANUEL SCHIMUNEK, M.D.

FRANK K. MORRIS, M.D.

(*ex-officio*)

GEORGE H. YEAGER, M.D.

(*ex-officio*)

Nominating Committee

FRANK K. MORRIS, M.D.

GEORGE H. YEAGER, M.D.

HARRY BECK, M.D.

LOUIS C. DOBIHAL, M.D.

JOHN F. HOGAN, JR., M.D.

Representatives to General Alumni Council

FRANK K. MORRIS, M.D.

GEORGE H. YEAGER, M.D.

WILLIAM H. TRIPLETT, M.D.

Representatives, Editorial Board, Bulletin

HARRY M. ROBINSON, JR., M.D.

JOHN F. SAVAGE, M.D.

C. VERNON WILLIAMSON, M.D.

GIBSON J. WELLS, M.D.

(*ex-officio*)

Representatives, Advisory Board, Faculty

FRANK K. MORRIS, M.D.

GEORGE H. YEAGER, M.D.



ALUMNI ASSOCIATION

SECTION

President's Letter

Fellow Physicians:

As the newly elected president of your Medical Alumni Association I wish to extend my sincere thanks and appreciation for the honor of this responsibility. To you Alumni, the officers and the Board of Directors send greetings and best wishes and resolve to serve you and the Association to the best of our abilities in the coming year by continuing and expanding the progressive programs our predecessors have initiated. At this time I wish to cite three people for their contributions to the welfare of the Association. To Dr. George Yeager, our thanks for his business-like handling of the office of president and secondly, to our treasurer, Dr. Howard B. Mays, who has done an excellent job of putting our organization on a sound financial basis. Thirdly, but not least, our Executive Director, Dr. William H. Triplett, upon whose shoulders rests the thankless task of seeing that all the wheels work smoothly and perfectly together, and who merits the title more than any other of "Mr. Medical Alumni Association." Lastly, our deepest appreciation to all those who work so tirelessly on committees and other assigned jobs without much recognition.

For the coming year of 1964, in May to be exact, plans are developing for a meeting of the various University Hospital Associations under the sponsorship of and combined with the annual Medical Alumni Association meeting. This will be a new venture which will offer outstanding speakers and scientific sessions of generalized and specialized interest to all. We fervently hope this action will generate a tremendous amount of enthusiasm in all Medical Alumni, and all other parties concerned. A committee consisting of Dr. Edward F. Cotter, chairman, and Drs. Ernest I. Cornbrooks and C. Parke Scarborough, Jr., appointed from the Medical Alumni, have been working most industriously with

representatives from the Hospital Associations in planning this event.

Please let me impress upon you how very necessary the support from each of you is urgently needed to make this an outstanding and exciting occasion for the Medical School Alumni Association, the Medical School, and the various Hospital Associations. Further information will soon be forthcoming, but now mark on your calendar May 8, 1964, as a red letter day. Let us all pull together to make this a most memorable meeting. This event will give you the added opportunity of seeing for yourself the remarkable program of expansion that is under way for the Baltimore campus. These developments will make you very proud to be numbered among the graduates of the School of Medicine and it will also, incidentally, make you experience a sense of nostalgia when you realize that the old familiar haunts of your student days have disappeared completely in the path of progress.

In conclusion, remember May 8, 1964, plan to attend, bring your wife (there will be activities for the ladies) and make this day an unparalleled success. If you have any suggestions, criticisms, etc., please forward these to the Medical Alumni Office. In future letters I shall discuss other subjects which I feel will be of real interest to you. Remember your officers and Board wish to serve you and your Association in the best traditions of the past.

Sincerely,

GIBSON J. WELLS, M.D.
President

Alumni Attend Cocktail Party at Atlantic City A.M.A. Meeting

MORE THAN 20 Alumni and their ladies attended the annual Alumni cocktail party held on June 19 at the Hotel Dennis in Atlantic City. Those present included Drs. Joseph Nataro, Sr., Class of 1925; E. A. Schimunek, David An-

drew, and Page Jett, Class of 1931; S. M. Donchi, Class of 1927; J. H. Hawkins, Class of 1956; J. H. Limauro, Class of 1906; Louis A. M. Krause, Class of 1917.

Also present were Drs. Albert E. Goldstein, Class of 1912; Herman J. William, Class of 1940; Donald Mintzer and Walter Spelsberg, Class of 1944.

Minutes of Annual Meeting of the Alumni Association

June 6, 1963

Held in conjunction with the annual Alumni Day, the annual business meeting of the Medical Alumni Association was called to order by Alumni President, George H. Yeager. Dr. Howard B. Mays, Treasurer, reported a balance of \$15,322.80 in the savings account and \$1,441.26 in the Student Loan Fund. He also indicated progress on an up-to-date curriculum vitae on the recent medical school graduates. Dr. Mays reported on preliminary plans for a Central Alumni Center and Alumni Club for the Baltimore campus.

Dr. William H. Triplett, in presenting the Necrology Report (listed in the July 1963 BULLETIN), noted that 118 alumni had died in the past year, one of whom was Dr. H. Boyd Wylie, former Dean of the School of Medicine.

Dr. Louis A. M. Krause of the Class of 1917 was the recipient of the Honor Award and Gold Key presented by Dr. George Yeager. Dr. Krause, "Scientist, astute clinician, humanitarian, scholar, bibliophile, counselor, and friend," exemplifies the highest ideals of the healing art.

Dr. Krause's remarks upon this occasion were most expressive. He reminisced about some of the changes in medicine and he emphasized the need of the teacher for the student.

Dr. Arthur G. Siwinski reported regarding the relationship of the BULLETIN of the School of Medicine and the Medical Alumni Association. He indicated that his committee was considering the following recommendation: First, that the BULLETIN revert to its original status of being a Medical School Bulletin.

(a) This can be done at once or phased over a year. (b) If over a period of a year, the amount of the Alumni contribution be decreased and these funds be used to send out a four-page "News Letter." Second, the committee thinks that an Alumni publication should: (a) record alumni policies; (b) serve as a medium of contact for alumni; (c) report on important school activities; (d) possibly be used for factual but non-technical abstracts of medical papers and research by faculty.

A motion was duly made and seconded and it was agreed that the Alumni would be polled by questionnaire, asking for their views regarding the BULLETIN.

The report of the Executive Director, Dr. William H. Triplett, followed next (this was published in the July 1963 issue of the BULLETIN).

A report of the nominating committee was next rendered by Dr. Arthur G. Siwinski, Chairman. The following officers were nominated for the year 1963-64: President, Gibson J. Wells; President-elect, Dr. John Franz; Vice Presidents, Drs. Louis Daly, Vincent Davis, and Archie Cohen; Secretary, Dr. Francis J. Borges; Treasurer, Dr. Howard B. Mays.

For the Board of Directors, each for a three-year term, Drs. William Supik, Hugh McNally, and Emmanuel Schimunek were nominated.

Representatives to the General Alumni Council included Drs. George H. Yeager, Frank K. Morris, and William H. Triplett.

Nominated from the floor for the Nominating Committee were: Drs. Harry Beck, Louis Dobihal, and John Hogan, Jr.

Alumni Day 1963

The following alumni registered for the annual meeting and scientific program.

Class of 1898

B. W. Fassett

Class of 1910

John G. Runkel Maurice C. Shamer

Class of 1911

John F. Slogan, Sr.

Class of 1912

A. E. Goldstein

Class of 1913 U. of M.

Philip J. Bean	N. C. Nitsch
Jesus Marie Buch	Walter A. Ostendorf
C. Reid Edwards	H. C. Raysor
Harry Goldsmith	W. H. Toulson
Leonard Hays	

P & S 1913

R. Bernabe	Paul N. Fleming
Ray M. Bobbitt	Isidor Heller
J. F. Easton	William T. May
S. E. Enfield	W. E. Myles
Charles W. Finnerty	

B.M.C. 1913

E. Lassise Rivera	Victor C. Nah
Ernest G. Marr	George Piness

Class of 1914

Austin H. Wood

Class of 1915

William R. Johnson

Class of 1917

Louis Krause Frank N. Ogden

Class of 1918

John B. Bonner	John M. Nicklas
W. A. Darby	Joseph Sindler
M. F. Kocovar	Thomas C. Speake
Lang W. Anderson	

Class of 1919

Wetherbee Fort

Class of 1920

N. F. X. Banvard	J. Morris Reese
William J. B. Orr	

Class of 1921

Thomas R. O'Rourk

Class of 1923

Philip Hirsch	Paul A. Rothfuss
W. C. Jermuth	Richard Schorr
George A. Knipp	W. H. Shealy
Arthur M. Kraut	T. Joseph Touhey
Fred I. Kyper	Henry V. Weinert
Karl J. Myers	

Class of 1925

Joseph Nataro

Class of 1926

Margaret B. Ballard

Class of 1927

T. Nelson Carey	A. H. Finkelstein
Bernard J. Cohen	Frank K. Morris
E. Eugene Covington	

Class of 1928

William A. Berger	V. M. Maddi
Bernard Friedman	Aaron H. Meister
Lewis P. Gundry	Frank A. Merlino
S. J. Hankin	Peter Pileggi
John C. Krantz, Jr.	W. H. Varney
Joseph C. Laukaitis	S. Zachary Vogel

Class of 1929

Jacob H. Conn	George H. Yeager
Mabel I. Silver	

Class of 1930

Archie Robert Cohen	L. R. Schoolman
---------------------	-----------------

Class of 1931

Page C. Jett	Emmanuel A.
Arthur G. Siwinski	Schimunek

Class of 1932

John C. Dumler	A. C. Sollod
----------------	--------------

Class of 1933

M. Marvin Cohen	Milton E. Lowman
Meyer Etkind	Ben Miller
Jerome Fineman	S. Novenstein
Frank A. Franklin	David H. Rosenfeld
Ralph B. Garrison	H. E. Rutland
Gustav Highstein	Hyman Schiff
Lauriston L. Keown	Stephen Sewell
Myron L. Kenler	Ashby W. Smith
L. A. Kochman	John L. Van Metre

Class of 1934

Frank H. J. Figge	John N. Snyder
-------------------	----------------

Class of 1935

Edward F. Cotter	H. B. Mays
William G. Heifrich	Harry M. Robinson

Class of 1936

W. E. Karfgin	Gibson J. Wells
W. Kennedy Waller	

ALUMNI ASSOCIATION SECTION

Class of 1937

Everett S. Diggs	C. Parke
D. F. Kaltreider	Scarborough
Samuel T. R.	J. King B. E.
Revell, Jr.	Seegar, Jr.

Class of 1938

Melvin N. Borden	Henry Rothkopf
Geraldine Powell	Sidney Scherlis
Bradley	John M. Scott
Stanley E. Bradley	Robert C. Sheppard
Wilbur S. Brooks	Edward Siegel
John J. Bunting	Emanuel Sprei
John F. Coolahan	Adam G. Swiss
Victor Dolfman	Bernard O.
Aaron Feder	Thomas, Jr.
Lester I. Fox	Winfield L.
Samuel L. Fox	Thompson
Louis C. Gareis	John A. Wagner
Joseph M. George, Jr.	H. Leonard Warres
Florence H.	A. S. Werner
Gottdiener	Celeste Lauve
Mary L. Hayler	Woodward
Francis J. Januszkeski	Theodore E.
William R. Lumpkin	Woodward
Ernest Michaelson	Kennard Yaffe
James H. Miniszek	

Class of 1939

D. L. Reimann	John P. Urlock, Jr.
---------------	---------------------

Class of 1940

James R. Karns

Class of 1941

Elizabeth B. Sherrill

Class of 1942

J. Howard Franz	John D. Rosin
Joseph C. Furnari	E. Roderick Shipley

Class of 1943

Elizabeth Acton	Augustus H. Frye, Jr.
Ruth W. Baldwin	Eli Galitz
Charles Vernon	Richard M. Garrett
Bowen, Jr.	Rocco Louis Sapareto
Henry T. Brobst	Edwin H. Stewart, Jr.
Harry Cohen	Glenn O. Summerlin
E. Ellsworth Cook	Irving J. Taylor
R. M. N. Crosby	Charles W. Trader
William J. Davis	David R. Will
William R. Eaton	Arthur O. Woodydy
Daniel Ehrlich	David K. Worgan

Class of 1944

Donald Mintzer	Charles E. Shaw
----------------	-----------------

Class of 1945

Stanley R. Steinbach

Class of 1946

Joseph D'Antonio	Thomas B. Connor
------------------	------------------

Class of 1947

Jane Gerlach

Class of 1948

Katharine V. Kemp	Kyle Y. Swisher, Jr.
Nicholas Mallis	Frank J.
Fred R.	Theuerkauf, Jr.
McCrumb, Jr.	J. D. Wilson
J. L. Rhyne	William S. Womack

Class of 1950

F. Borges

Class of 1952

Luis F. Gonzalez

Class of 1953

Louis Arp, Jr.	George Gevas
Grace A. Bastian	George O.
Joseph R. Bove	Himmelwright
John Codington	Leslie R. Miles, Jr.
Salomon Colon Lugo	Joseph E. Shuman
Wyand F.	Robert T. Singleton
Doerner, Jr.	William P.
Leonard H. Flax	Templeton

Class of 1954

Robert B. Goldstein	David A. Levy
John F. Hartman	C. Barton Galloway

Class of 1958

Stuart H. Brager	Maurice M. Reeder
Gilbert B. Cushner	James E. Taylor, Jr.
Sheldon Goldgeier	William T. Ward
William J. Hicken	Richard L. Wolfe
Arthur Litofsky	
Donald Frederick	
Manger	

Class of 1959

William J. R.
Dunseath

Class of 1960

Herman Brecher

Class of 1963

Stephen P. Cohen	Arthur M. Smith
H. Gerald Oster	Mitchell Carl Sollod
Stuart Perkal	



Dean Stone greets registrants..

CAMERA VIEWS ALUMNI WEEK 1963



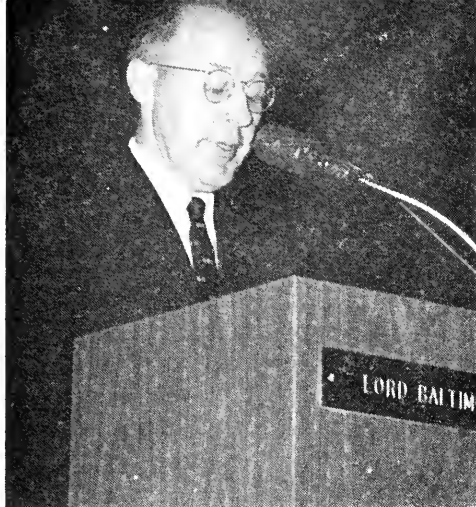
A trio of 50-year alumni of Class of 1913 reminisces on bench of portico of Davidge Hall.



Dr. William H. Triplett, B.M.C. 1911; Dr. B. W. Fawcett, B.M.C. 1898; Dr. George H. Yeager, Class of 1929.



Drs. Theodore Woodward, Joseph George, and James H. Meniszek of the Class of 1938; and Dr. Joseph D'Antonio of the Class of 1946.



Dr. L. K. Woodward of the Class of 1935.



Dr. Stanley Bradley, Class of 1938.



Dr. Louis A. M. Krause of the Class of 1917, winner of the Alumni Award for 1963, and Dr. George H. Yeager.



Drs. Wilbur Brooks, William Dodd and Lester Fox of the Class of 1938.

Alumni Banquet

More than 526 Alumni and guests attended the annual banquet at the Lord Baltimore Hotel, in honor of the Classes of 1913 and 1963. This banquet, the largest ever held by the Alumni Association, was highlighted by an address given by Dr. Lewis K. Woodward of the Class of 1935, Medical Director, Department of State, Washington, D.C. Dr. Woodward spoke informally and extensively of his experiences with "The Health of Americans in Overseas Diplomatic Posts."

Dr. Buch Receives Duplicate Gold Medal

Members of the Class of 1913 were present for the evening and received their 50-year diplomas from Alumni President, George Yeager. A highlight of the evening was the presentation of the Faculty Gold Medal to the honor graduate that year, a member of the Class of 1913, Dr. J. W. Buch, valedictorian of his class and recipient of the Gold Medal. Dr. Buch, presently a refugee from Castro's Cuba, received the duplicate medal from the hands of Dean Stone as a token of the continuing recognition of the School of Medicine for work well done.

Medical Background

Dr. Buch, who has had a distinguished career in medicine, interned at the University of Maryland Hospital and then at the provincial hospital in Santiago, Cuba, completing his basic training in 1914. He then served a residency in Surgery and Internal Medicine at Colonia Espanola Hospital in Santiago, followed by a postgraduate course in Internal Medicine at Polyclinic Hospital, New York City, which he completed in

1929. He then entered private practice in Santiago, limiting his interests to Internal Medicine. He was attending physician of Clinica Los Angeles, Colonia Espanola, and Clinica Sagrado Corazon in Santiago. At one time he was attending physician to the American and Norwegian Embassies. He was a member of the Santiago de Cuba Medical Society, serving as President in 1930. He was a member of the National Medical Association of Cuba and the Academy of Clinical Studies and held an honor diploma from the Medical Society of his country.

When it was learned that Dr. Buch's Gold Medal had been confiscated by the Communists, it was appropriately decided to reissue him one; this decision resulting in the presentation by Dean Stone.

1963 Legislature Passes "Good Samaritan" Law

A NEW LAW, effective July 1, 1963, protects the interest of physicians rendering emergency aid in the absence of adequate medical facilities. The law which covers only physicians licensed to practice in the State of Maryland is reproduced herewith.

A physician licensed to practice medicine by the Board of Medical Examiners of the State of Maryland who, in good faith, renders medical aid, care, not in a hospital, and assistance for which the physician received no fee or compensation, at the scene of an accident, shall not be liable for any civil damages as the result of any professional acts or omissions by him, not amounting to gross negligence, in rendering such aid, care, and assistance. The physician shall have a defense against any action, not amounting to gross negligence, for negligence or malpractice brought against him because of any professional acts or omissions in the rendering of such care, aid, and assistance.

Class

NOTES

ELSEWHERE in this edition you will find a "tear out" page, for reporting Alumni News to the BULLETIN. This is not an idle gesture.

Your achievements, fellow alumni, are of interest to your classmates. They constitute a reward to the faculty, are a challenge to the younger physicians, and are an item of prestige for the University. Please cooperate with us by forwarding notes of yourself or any alumnus to the BULLETIN. Thank you.

Class of 1901

F. F. Carman, 21 Parkway, Montclair, N. J., has been in the general practice of medicine for almost 75 years. Dr. Carman, who is nearly 88, served as President of the Mountainside Hospital medical staff during the years 1930-31.

Class of 1909

C. F. Strosnider of 11 E. Chestnut St., Goldsboro, N. C., is active in practice at the age of 81. In response to an inquiry, Dr. Strosnider informed the BULLETIN that he practices five days a week, four hours a day, and two hours on Saturday morning. He serves as medical consultant to the North Carolina State Hospital, making one visit per week. He is active in the county medical society and in the North Carolina State Medical Society, having completed 17 years of membership in the House of Delegates of the A.M.A., as a representative of the state medical society.

Class of 1924

James E. Peterman has been appointed Director of the Bureau of Com-

municable Diseases of the Baltimore City Health Department.

Dr. Peterman, a native of Baltimore City, received the Master of Public Health degree in 1940 from the University of Pennsylvania. During World War II he served as a Lieutenant Colonel in the Army Medical Corps.

Most recently Dr. Peterman has been co-ordinator of tuberculosis control services for the State of New Jersey.

Class of 1929

Francis A. Clark has changed his address from 212 Morris St., Charleston 1, W. Va., to 205 Bradford St. in the same city.

Jacob Victor Safer has moved to the Guilford Apartments (313) at 14 W. Cold Spring Lane, Baltimore 10, Md.

Class of 1930

Samuel Fisher has moved to a new address, which is 808 Madison Ave., Paterson, N. J.

Class of 1933

Harold Sager of 325 Avenue C, Bayonne, N. J., was recently recorded as deceased, the information having been conveyed to the BULLETIN by a classmate. In this public apology, the BULLETIN sincerely regrets the error and at the same time continues to ask all Alumni to report important news from classmates, of course accurately.

Class of 1940

William R. Platt, Assistant Professor of Pathology at the Washington University School of Medicine in St. Louis, has recently returned from Athens, Greece, where he delivered a lecture be-

fore the medical faculty of the University of Athens School of Medicine. Dr. Platt spoke on "Recent Advances in Pathology." Following his sojourn in Greece, Dr. Platt attended the International Forensic Pathology meeting held in Rome, Italy.

Class of 1945

Frank J. Ayd, currently a resident of Rome, Italy, has been invited to give four special lectures under the auspices of the Università Gregoriana Pontifica on "Modern, Moral Ethical Problems." Dr. Ayd's subject will concern many new problems which have been or are emerging with the advances in medicine and research.

Dr. Ayd recently visited Dr. Ugo Cerletti, the father of electro-shock therapy, prior to his death. Dr. Ayd's impressions will be published in a subsequent issue of the BULLETIN.

Class of 1947

Norman Levin, who serves as director of the Department of Obstetrics at the Lutheran Hospital of Maryland, was recently the author of a paper entitled, "Transverse Vaginal Septum—A Rare Cause of Dystocia of Labor," the article appearing in *Obstetrics-Gynecology*, Vol. 22:327 (August), 1963.

Class of 1948

Merle S. Scherr, allergist, has been named chairman of the newly-formed committee of the American Academy of Allergy which will conduct a nationwide survey of rehabilitation programs for asthmatics and others suffering from chronic pulmonary disease.

The committee is compiling a directory of rehabilitation centers and physical conditioning programs for asthmatic pa-

tients in the United States and is attempting to facilitate exchange of information among investigators working in this field, leading to establishment of basic standards for rehabilitation.

The committee has announced three types of rehabilitations programs which include in-patient, in-patient—out-patient services, and out-patient services alone.

Further information may be obtained from the Chairman, Dr. Merle S. Scherr, 805 Atlas Bldg., Charleston, W. Va.

Class of 1949

John Franklin Strahan has announced a partnership in the practice of Dermatology with Dr. William James Ross Dunseath of the Class of 1959. Drs. Strahan and Dunseath will remove their offices to Suite 403 Latrobe Building, 2 E. Read St., in Baltimore.

Class of 1953

In the July 1963 BULLETIN of the School of Medicine it was erroneously stated that **Dr. Jesse W. McCracken** was a member of the Class of 1955. Dr. McCracken has recently been certified by the American Board of Surgery and is now associated with Dr. C. T. Whittington of the Class of 1927 in the practice of Surgery at 108 E. Northwood St., Greensboro, N. C. He will seek certification in Thoracic Surgery in the near future. The BULLETIN regrets the error.

Class of 1957

Marvin S. Arons of 107 Strand, Galveston, Texas, has been appointed resident in Plastic Surgery at the University of Texas Medical Center in Galveston. Dr. Arons was recently awarded an American Cancer Society Fellowship to conduct research on the relationship between scar tissue and malignant disease.

Deaths

P & S 1893

W. Wayne Babcock, of "Four Posts," St. Asaph's Rd., Bala-Cynwyd, Pa., died on February 27, 1963. Dr. Babcock was 90.

Albert M. Whisnant of Charlotte, N. C., died on January 22, 1963. Dr. Whisnant was 95.

B. M. C. 1893

Louis F. Sherman died recently.

P & S 1895

Gory Hogg of Lewisburg, West Virginia, died on March 24, 1963. Dr. Hogg was 89.

Class of 1897

Charles Franklin Cooper of Perry, Ga., died on January 24, 1963, at the age of 90.

Class of 1898

John Oliver Davies of 4215 Lowell Drive, Baltimore, Md., died on January 14, 1963.

Class of 1900

J. Clagett Robertson of 117 S. Broadway, Baltimore, Md., died on May 18, 1963.

Class of 1902

Robert Frank Booker of Lottsburg, Va., died on February 25, 1963, at the age of 82.

B. M. C. 1903

William P. McGuire of Wylliesburg, Va., died on February 26, 1963, aged 93.

Class of 1904

Major Richmond Favour, U. S. Army Medical Corps Retired, of Washington, D. C., died on August 25, 1962, aged 86.

Class of 1906

George Louis Pence of Hinton, W. Va., died on August 18, 1961.

Class of 1909

Adam Seanor Kepple, 14 Greenleaf St., Greensburg, Pa., died March 25, 1963. Dr. Kepple was 81.

Class of 1912

Joseph Rottenberg, 20441 Stratford Rd., Detroit, Mich., died recently.

Class of 1914

John S. Fenby died on June 17, 1963, after a long illness. Dr. Fenby was 72.

A native of Baltimore, the son of Dr. Edwin B. Fenby, a general practitioner, he was graduated from the Baltimore City College. During World War I he served as a first lieutenant in the Army Medical Corps.

Dr. Fenby was a fellow of the American College of Physicians, a member of the American Board of Pediatrics, and a member of the Medical and Chirurgical Faculty of Maryland.

Class of 1920

Howard M. Bubert, Medical Arts Building, Baltimore, Md., died on July 13, 1963.

Class of 1924

Earle W. Koons, 1138 Northern Pkwy., Baltimore, Md., died on June 5, 1963.

Class of 1925

Abner M. Fuchs of 29 E. 9th St., New York City, died on February 26, 1963, at the age of 62.

Class of 1927

Ardvern Kemp Fidler of Milledgeville, Ga., died on March 9, 1963. Dr. Fidler was 61.

Class of 1933

Saul Zager of 553 Lincoln Ave., Orange, N. J., died at the age of 51 of coronary thrombosis on May 25, 1962.

Class of 1936

Reid L. Beers, 1625 Irving Ave., Glendale, Calif., died on October 9, 1962.

James H. Bunn, Jr., of 37 Loudon Pkwy., Loudonville, N. Y., died January 4, 1963. Dr. Bunn was 51.

Class of 1938

Arthur V. Milholland died suddenly on March 29, 1963, at his home, 1221 Valley St. in Baltimore. Dr. Milholland had been engaged in General Practice.

Leonard C. Molofsky of 280 MacArthur Blvd., Oakland, Calif., died recently of carcinoma of the stomach. Dr. Molofsky was a member of the Kaiser-Permanente Medical Group.

Alvin A. Welfeld met a sudden and untimely death in a fire which consumed the garage at his summer home on August 21, 1963. Dr. Welfeld's obituary will appear in a future issue of the BULLETIN.

Class of 1940

Leonard Vincent Don Diego, 1218 85th St., Brooklyn, N. Y., died on February 16, 1963.

Concerning the untimely death of Dr. Don Diego, Dr. Edward L. J. Molz, a classmate, writes: "He is survived by his wife, Grace, and two sons, Leonard, Jr., who completed his Freshman year at Columbia University pre-medical school, and Edward, who completed his junior year at high school.

"This information was given verbally to one of the faculty members, but since I hadn't noticed the article in the BULLETIN and since I had been entrusted with the reporting of Lenny's demise, I am forwarding this information now formally to be published in the next BULLETIN, out of deepest sympathy and respect for my classmate and dear friend, Lenny, and his family."

Class of 1941

Joseph J. Bowen of 452 Meriden Rd., Waterbury, Conn., died recently.

Class of 1946

Lowell R. Brosemer of 5788 Gloria Drive, Sacramento 22, Calif., died June 26, 1962. Dr. Brosemer was 41.

Class of 1955

Thomas W. Cowan, 3615 Carnegie St., Houston, Texas, was killed in an automobile accident June 6, 1962. Dr. Cowan was 33.



HEALTH SCIENCES LIBRARY
UNIVERSITY OF MARYLAND
BALTIMORE

MARYLAND ROOM .

